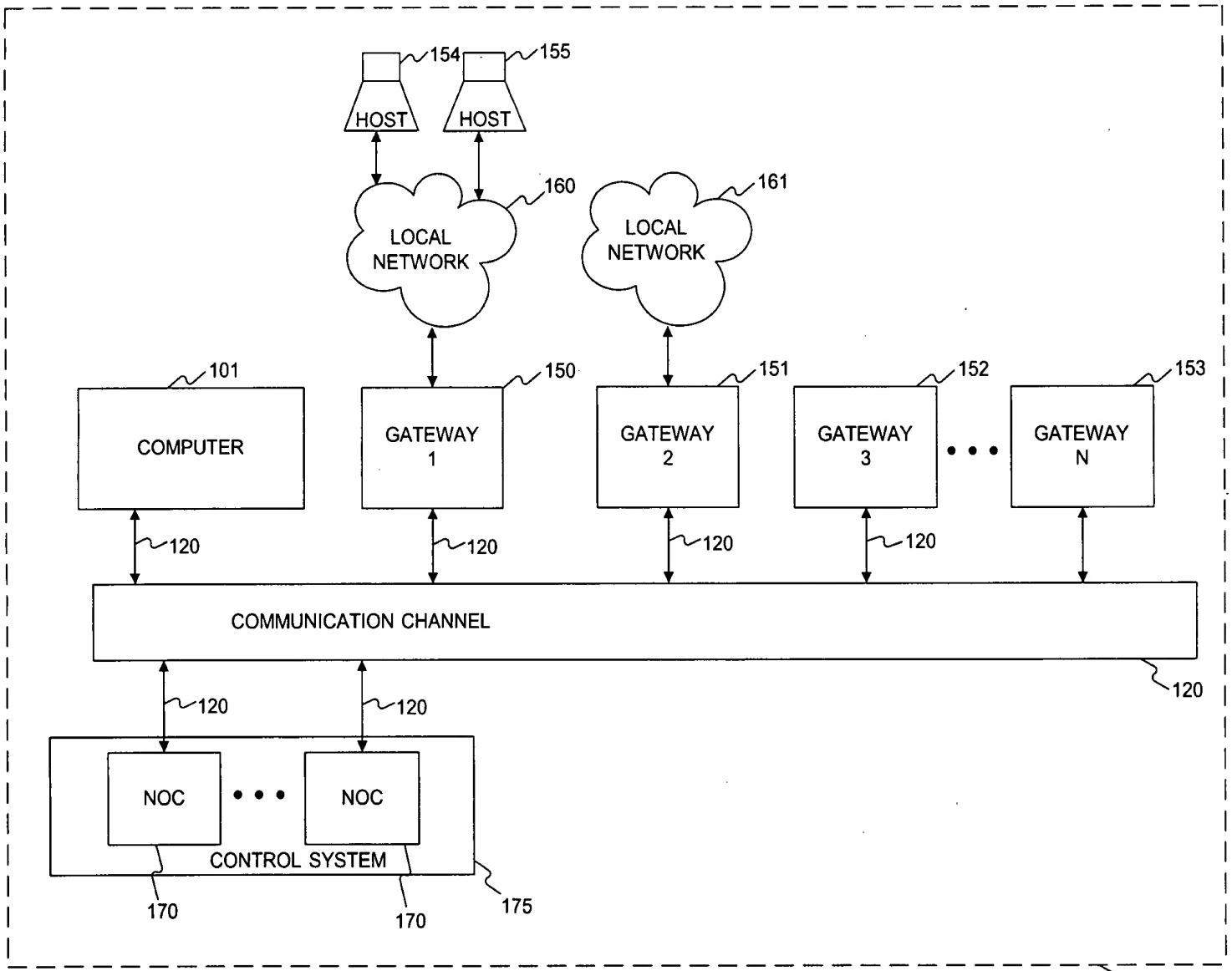

154
155
HOST
HOST
160
161
LOCAL NETWORK
LOCAL NETWORK
101
150
151
152
153
COMPUTER
GATEWAY 1
GATEWAY 2
GATEWAY 3
GATEWAY N
120
120
120
120
120
COMMUNICATION CHANNEL
120
120
NOC
NOC
CONTROL SYSTEM
170
170
175
100

FIG. 1

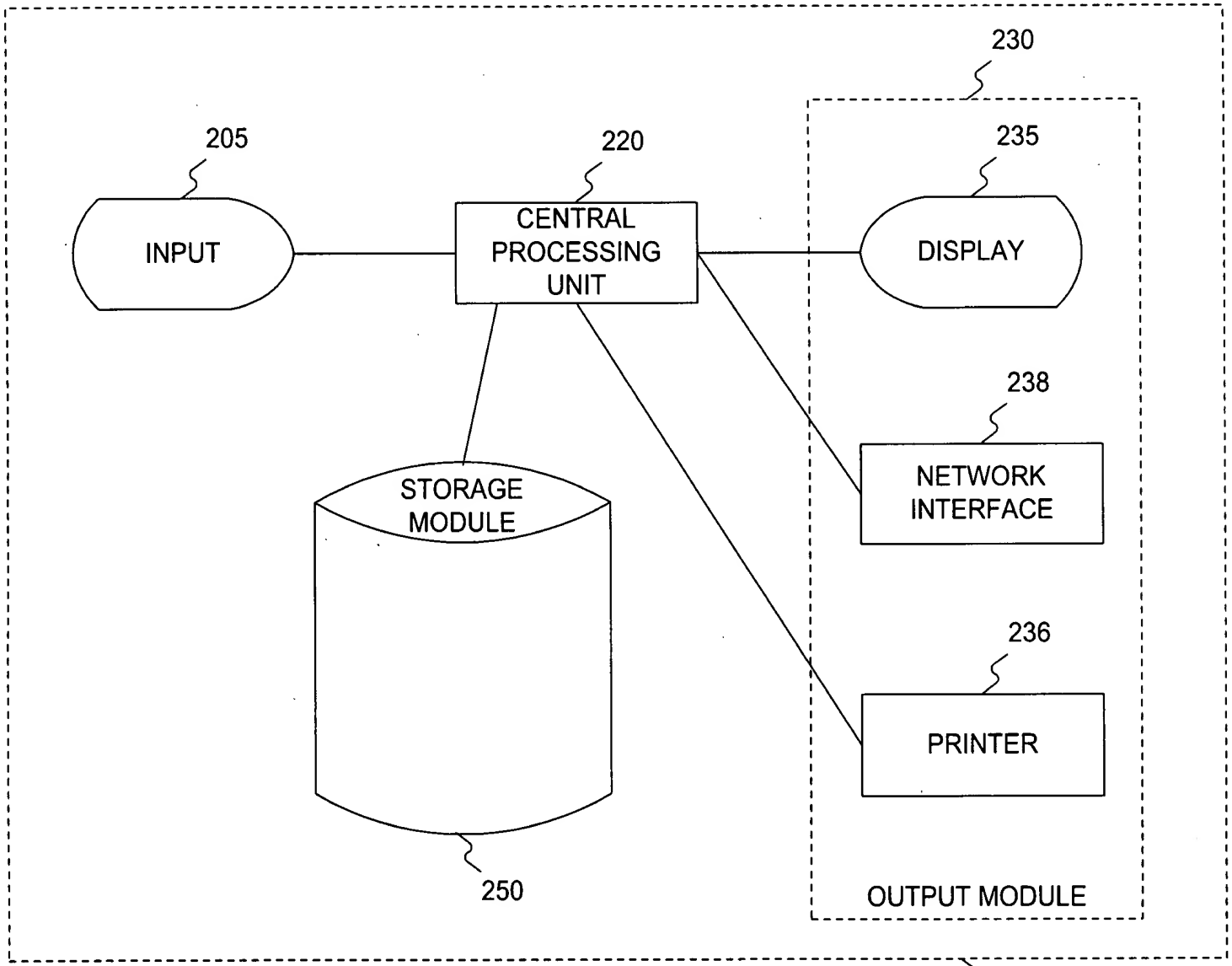

230
205
220
235
INPUT
CENTRAL PROCESSING UNIT
DISPLAY
238
NETWORK INTERFACE
STORAGE MODULE
236
PRINTER
250
OUTPUT MODULE
200

FIG. 2

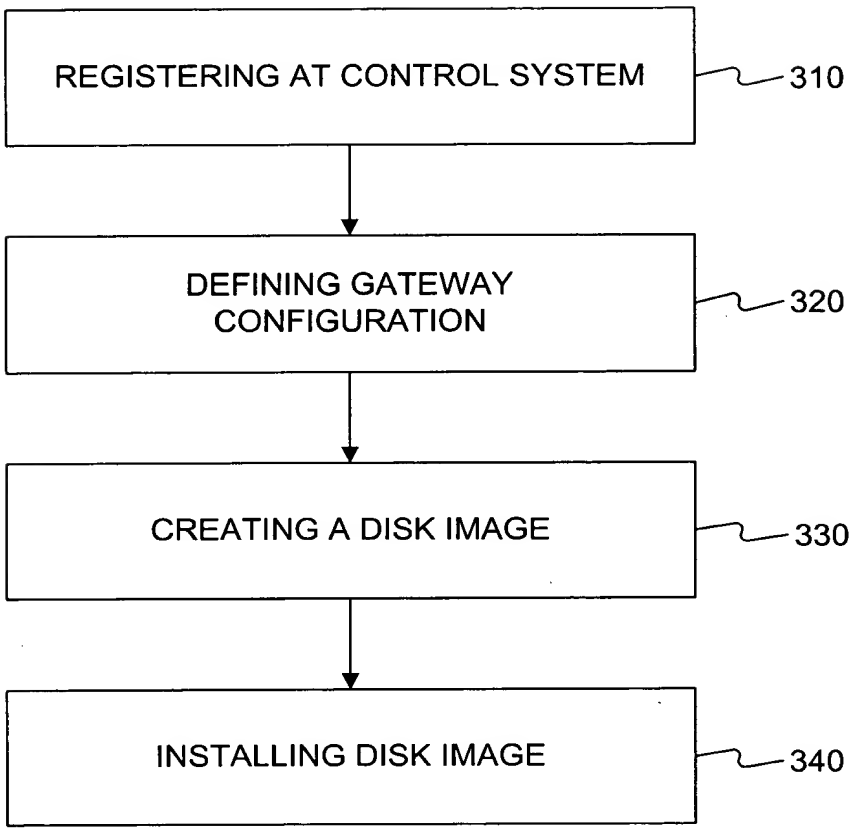

REGISTERING AT CONTROL SYSTEM
310
DEFINING GATEWAY CONFIGURATION
320
CREATING A DISK IMAGE
330
INSTALLING DISK IMAGE
340

FIG. 3

FOETBO" SHE2E960

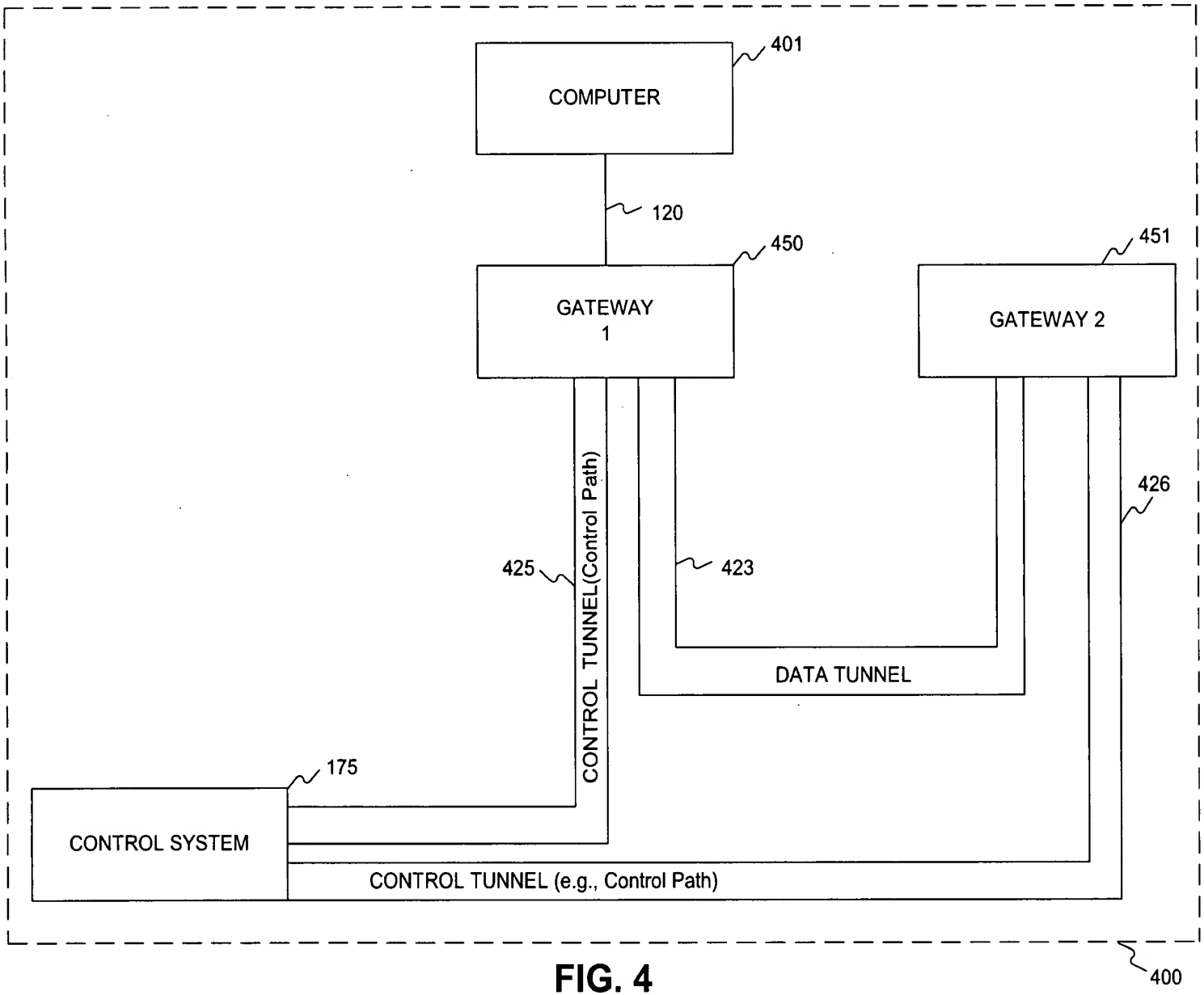


FIG. 4

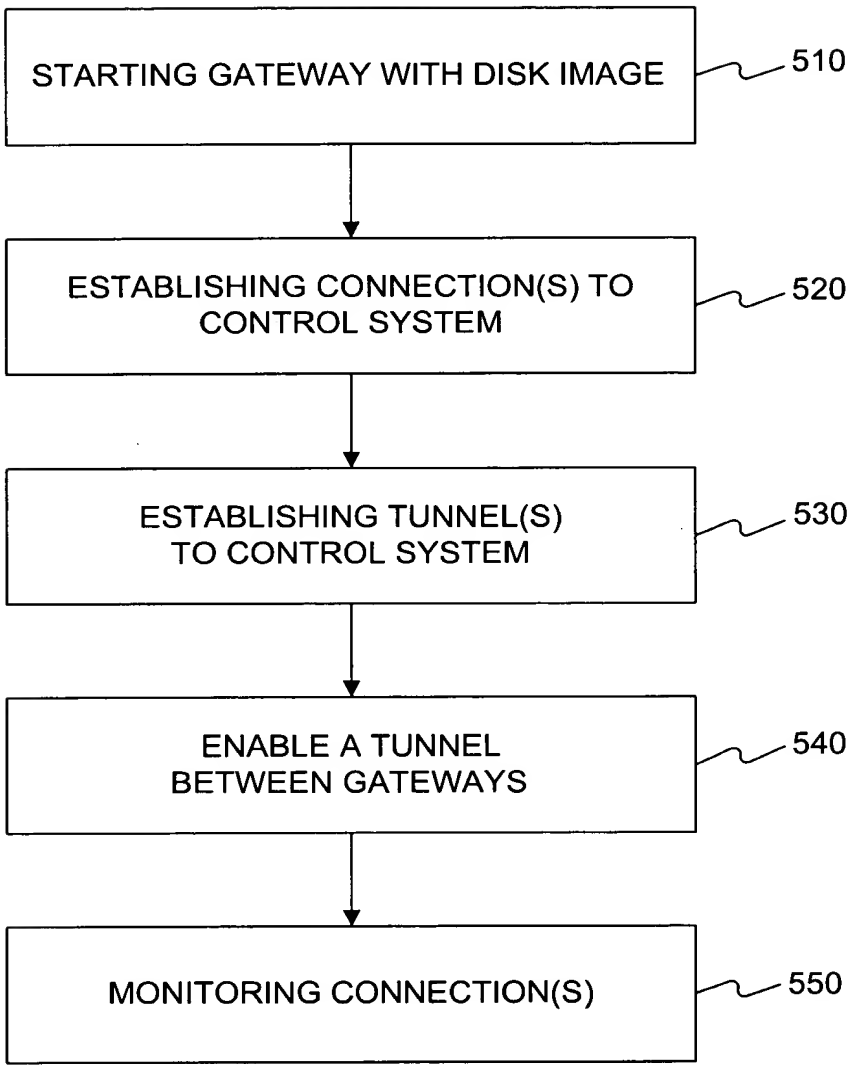

STARTING GATEWAY WITH DISK IMAGE
510
ESTABLISHING CONNECTION(S) TO CONTROL SYSTEM
520
ESTABLISHING TUNNEL(S) TO CONTROL SYSTEM
530
ENABLE A TUNNEL BETWEEN GATEWAYS
540
MONITORING CONNECTION(S)
550

FIG. 5

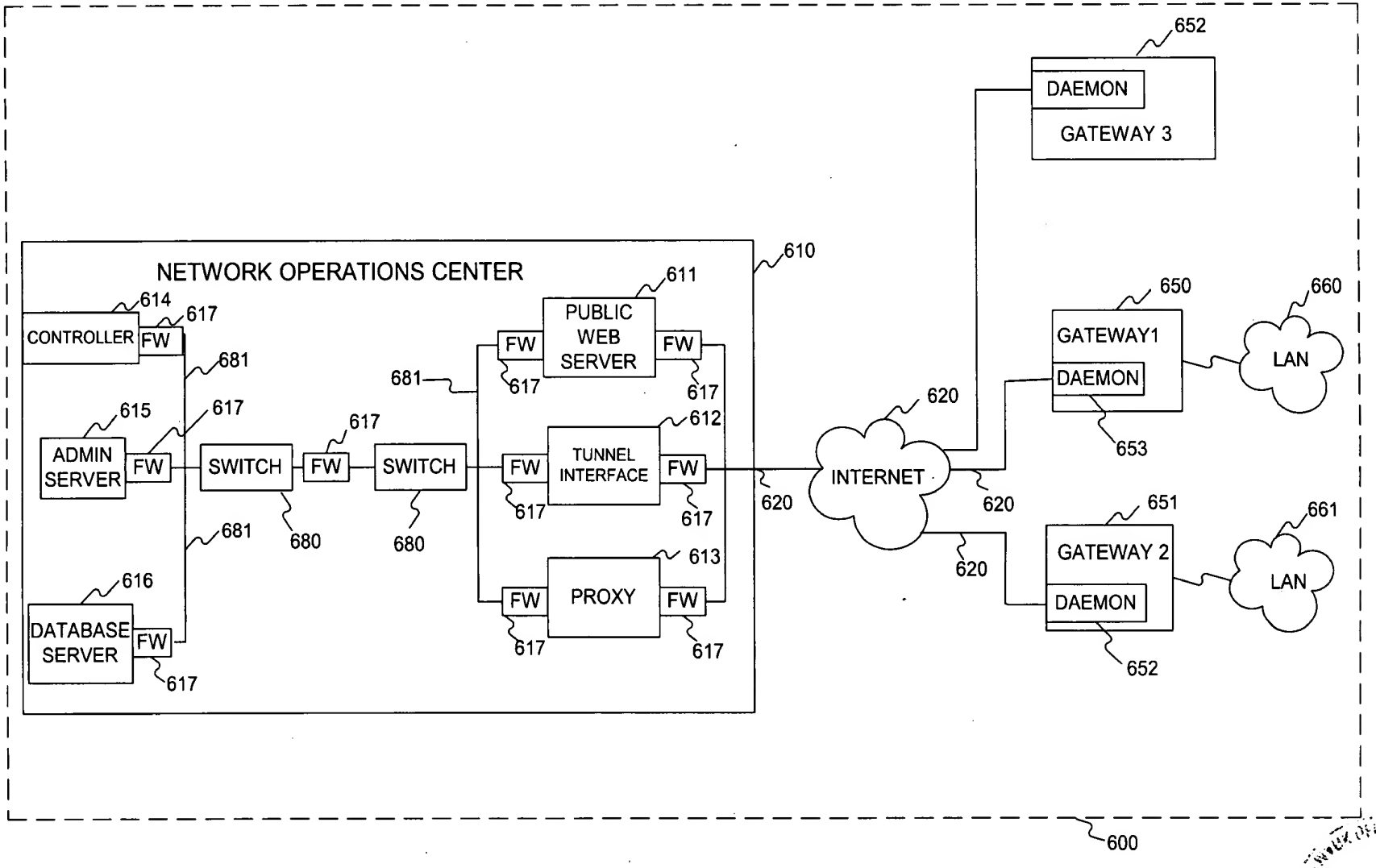

652
DAEMON
GATEWAY 3
NETWORK OPERATIONS CENTER
610
611
PUBLIC WEB SERVER
FW
617
681
614
CONTROLLER
615
ADMIN SERVER
SWITCH
680
612
TUNNEL INTERFACE
620
INTERNET
650
GATEWAY1
DAEMON
653
660
LAN
613
PROXY
616
DATABASE SERVER
651
GATEWAY 2
661
600

FIG. 6A

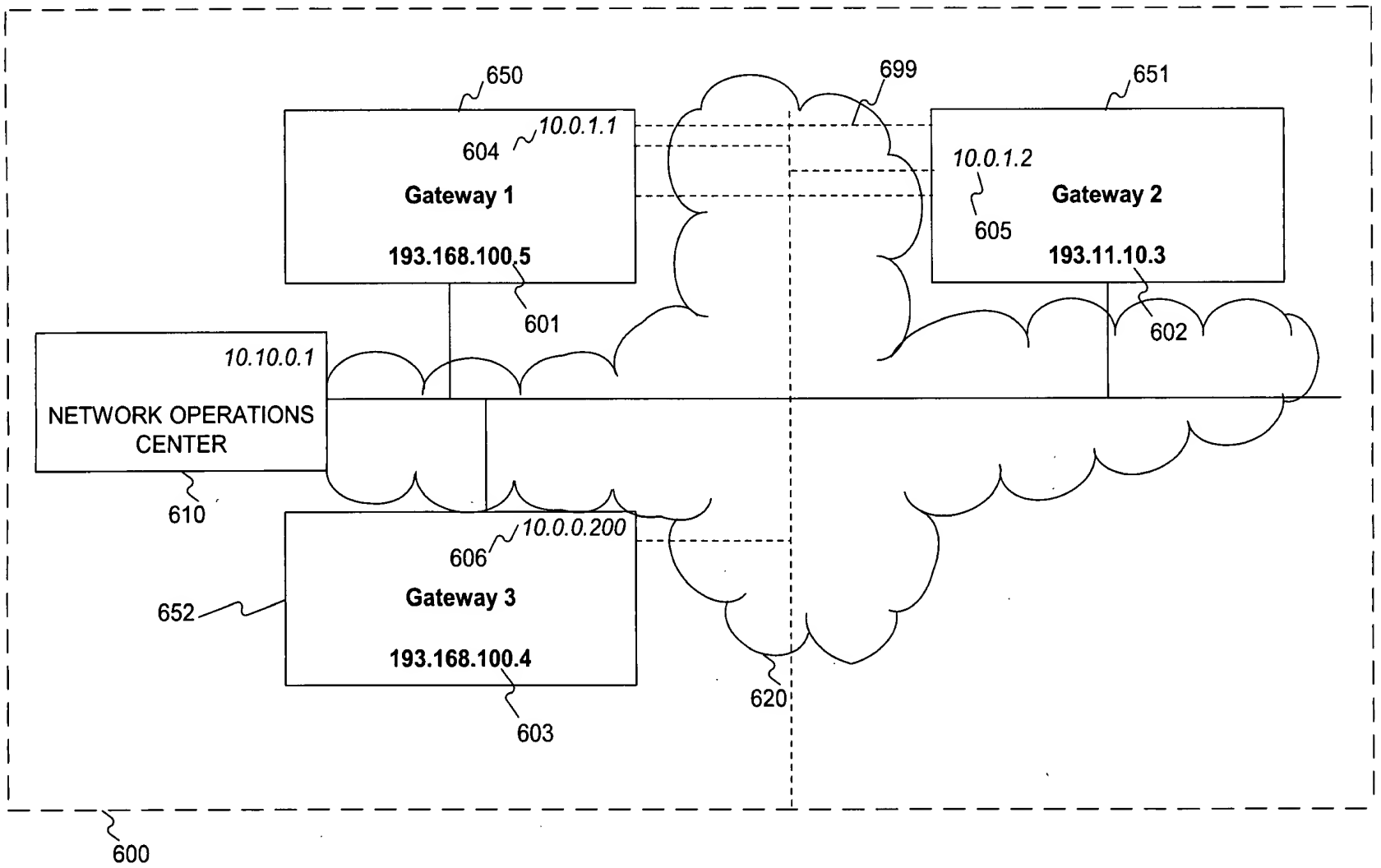

650
699
651
10.0.1.1
604
Gateway 1
193.168.100.5
601
10.0.1.2
605
Gateway 2
193.11.10.3
602
10.10.0.1
NETWORK OPERATIONS CENTER
610
10.0.0.200
606
Gateway 3
652
193.168.100.4
603
620
600

FIG. 6B

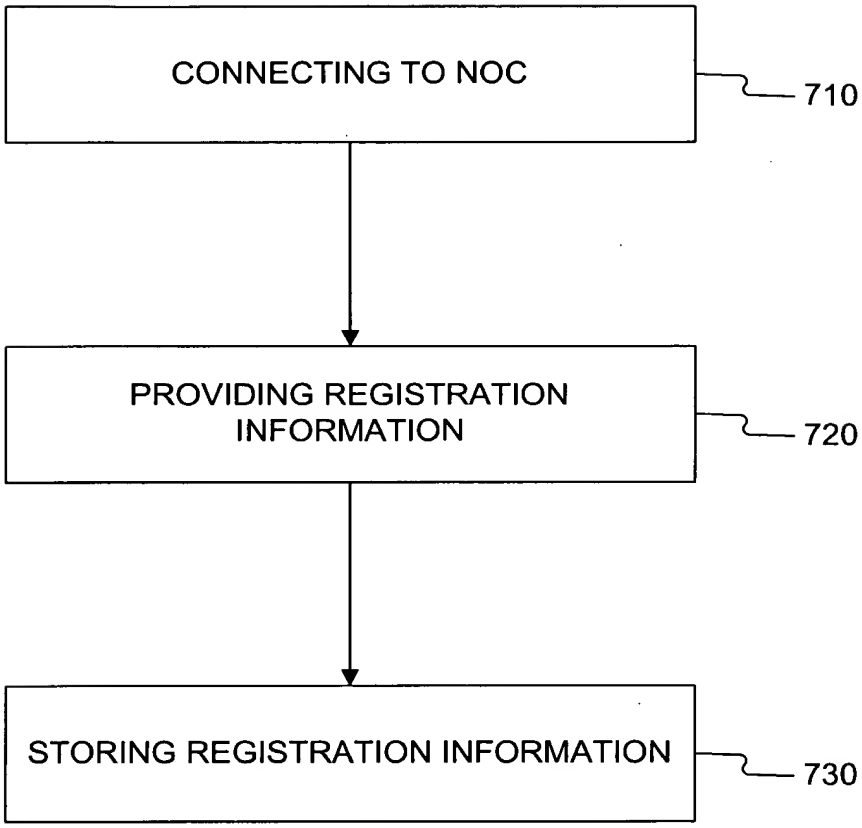

CONNECTING TO NOC
710
PROVIDING REGISTRATION INFORMATION
720
STORING REGISTRATION INFORMATION
730

FIG. 7

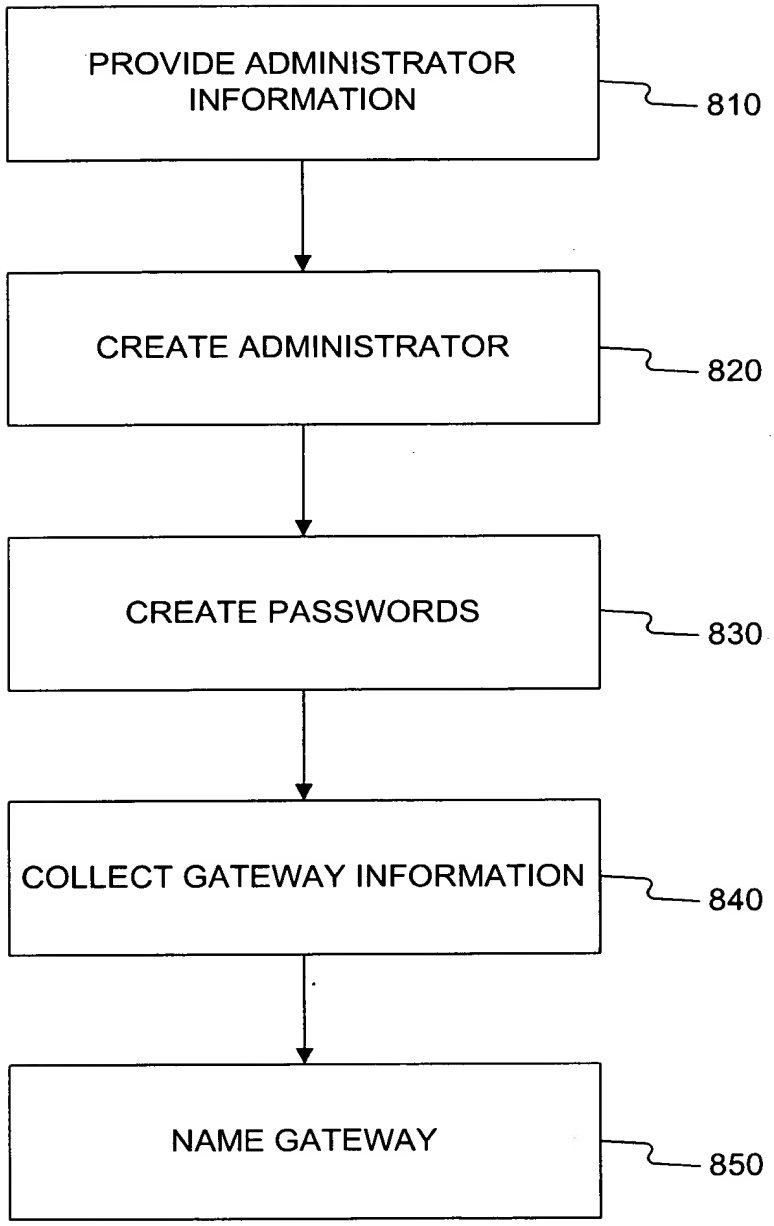

PROVIDE ADMINISTRATOR INFORMATION
810
CREATE ADMINISTRATOR
820
CREATE PASSWORDS
830
COLLECT GATEWAY INFORMATION
840
NAME GATEWAY
850

FIG. 8

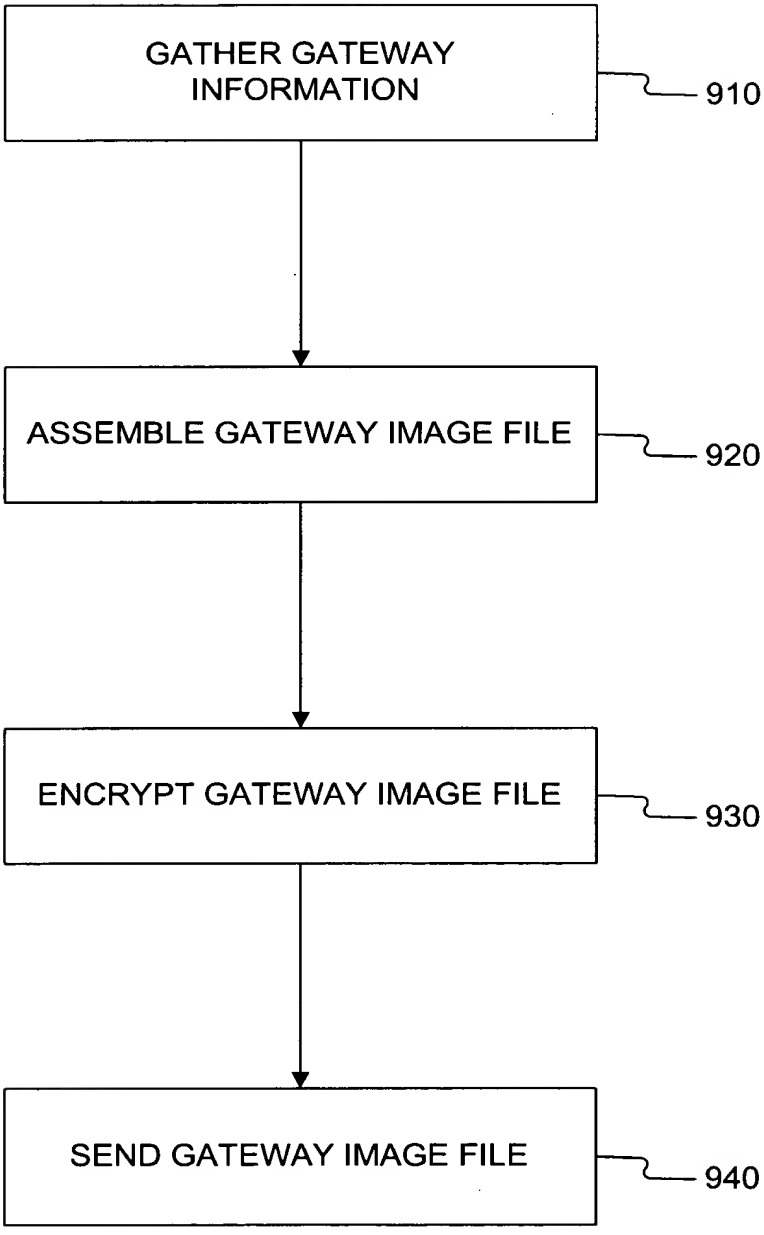

GATHER GATEWAY INFORMATION
910
ASSEMBLE GATEWAY IMAGE FILE
920
ENCRYPT GATEWAY IMAGE FILE
930
SEND GATEWAY IMAGE FILE
940

FIG. 9A

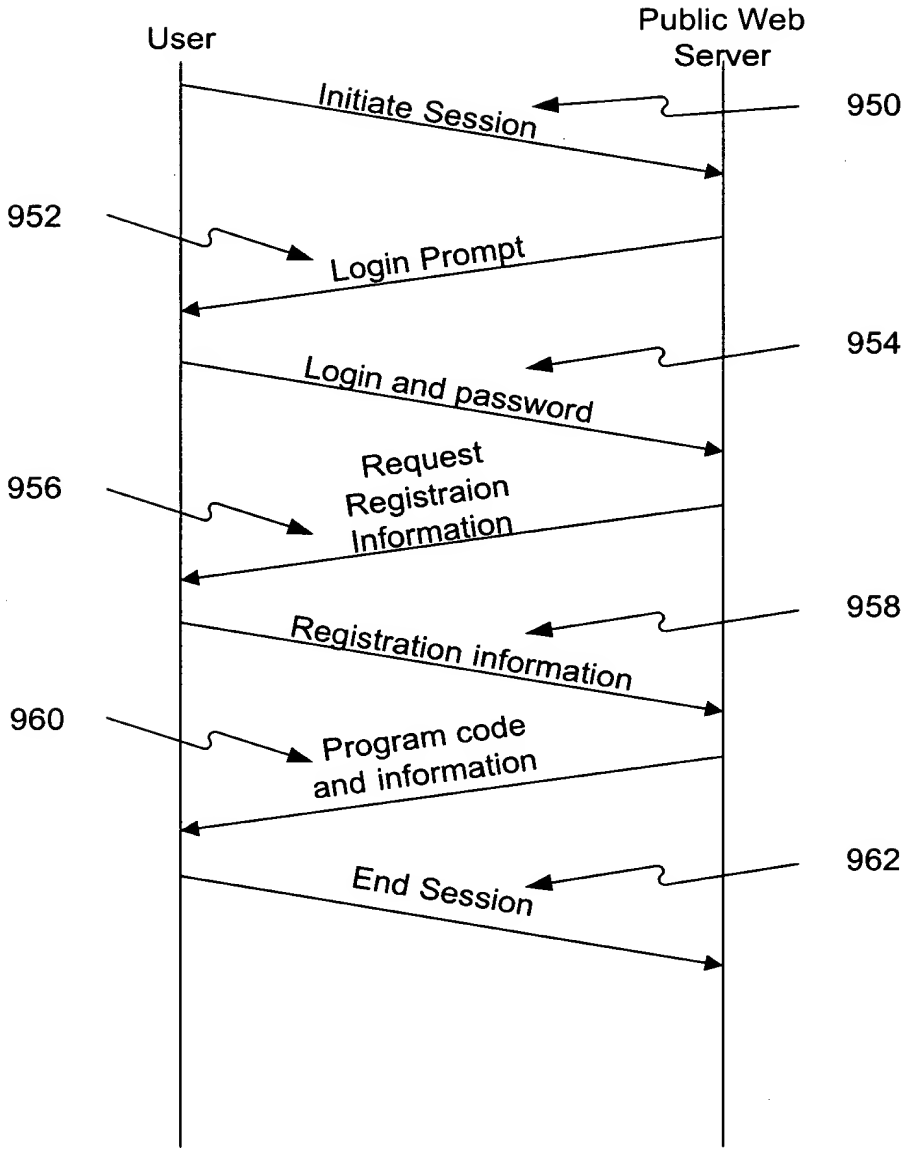

User
Public Web Server
Initiate Session
950
952
Login Prompt
954
Login and password
Request Registraion Information
956
958
Registration information
960
Program code and information
962
End Session

FIG. 9B

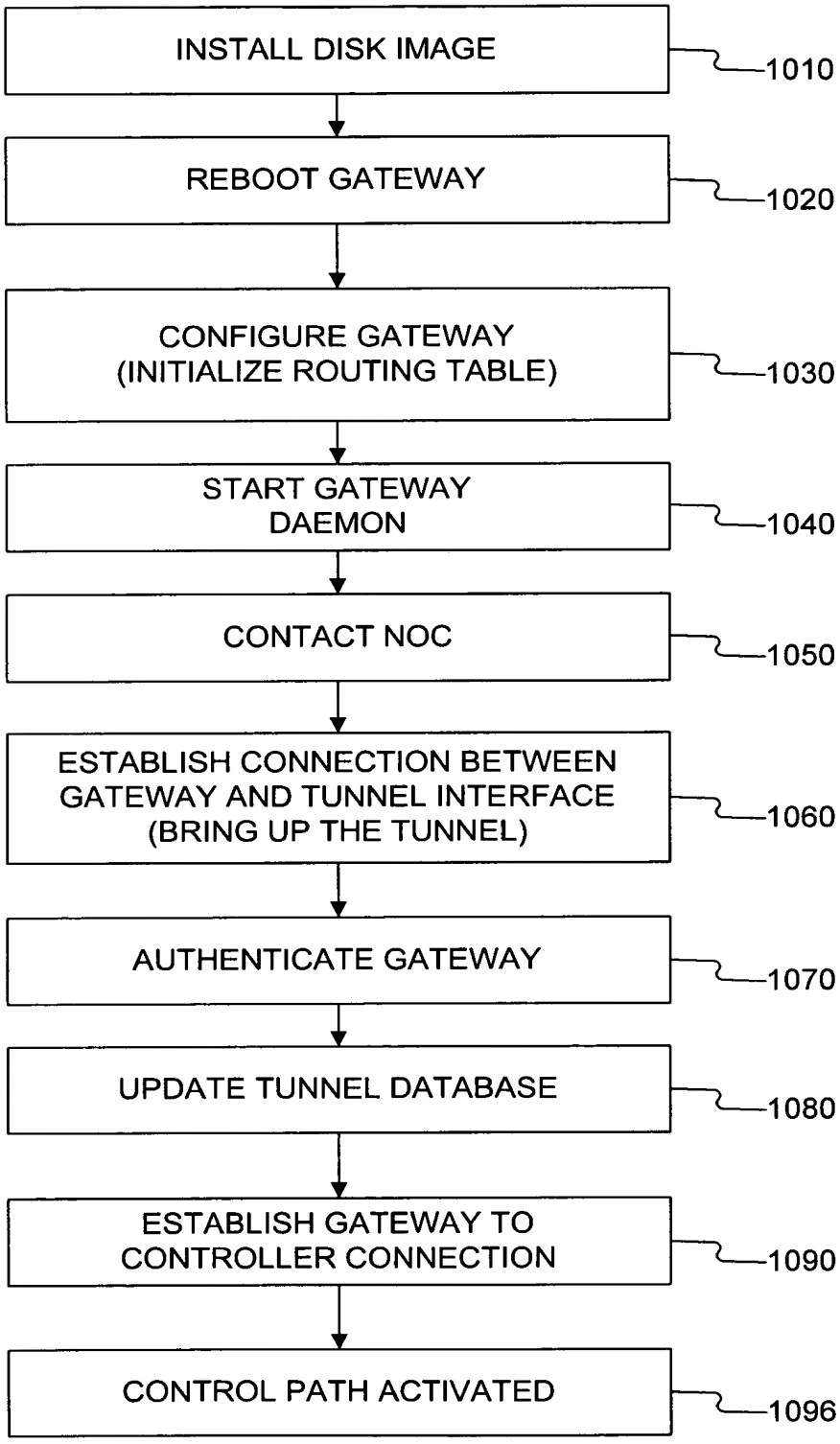

INSTALL DISK IMAGE
1010
REBOOT GATEWAY
1020
CONFIGURE GATEWAY
(INITIALIZE ROUTING TABLE)
1030
START GATEWAY
DAEMON
1040
CONTACT NOC
1050
ESTABLISH CONNECTION BETWEEN
GATEWAY AND TUNNEL INTERFACE
(BRING UP THE TUNNEL)
1060
AUTHENTICATE GATEWAY
1070
UPDATE TUNNEL DATABASE
1080
ESTABLISH GATEWAY TO
CONTROLLER CONNECTION
1090
CONTROL PATH ACTIVATED
1096

FIG. 10A

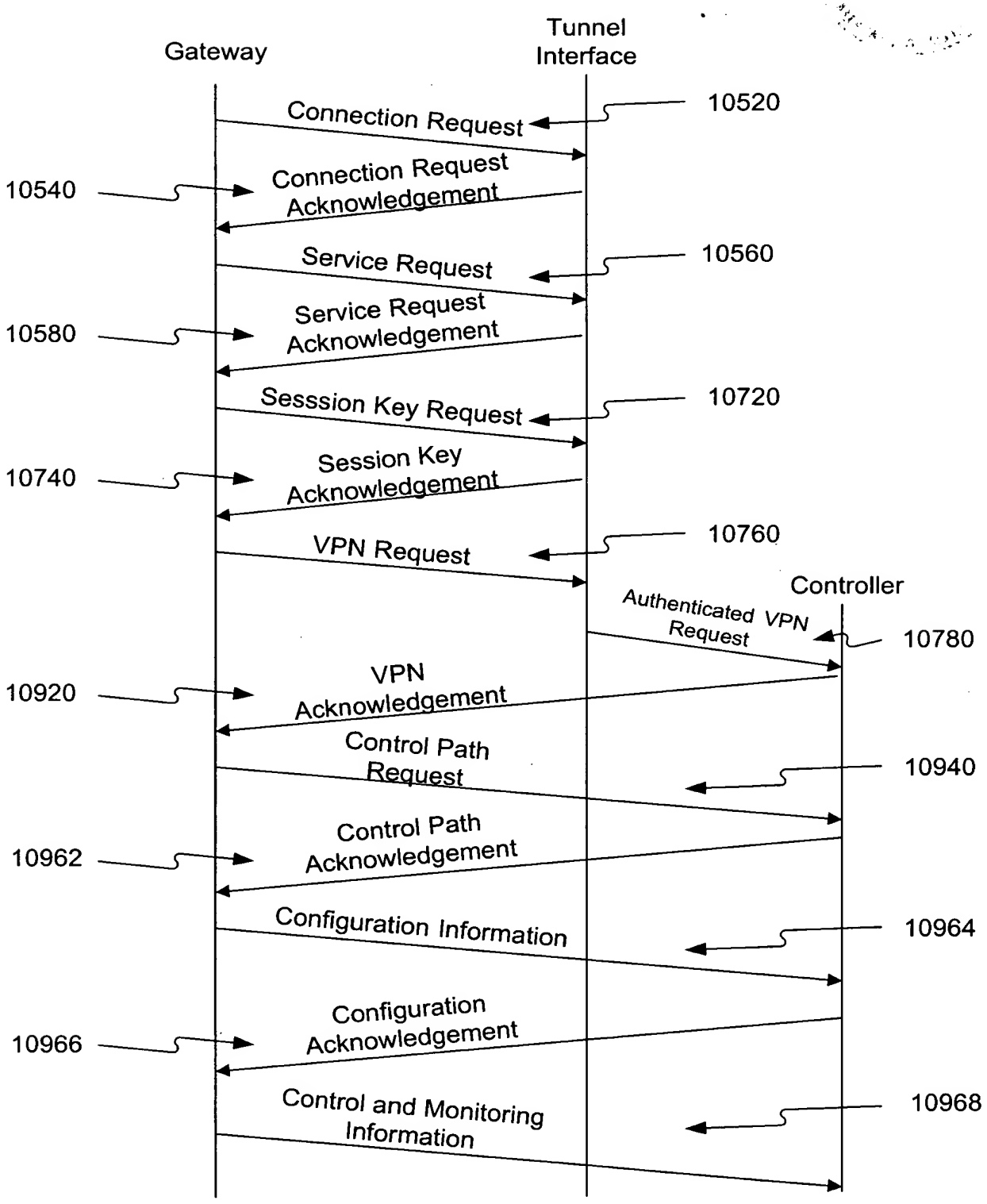

Gateway
Tunnel Interface
Connection Request
10520
Connection Request Acknowledgement
10540
Service Request
10560
Service Request Acknowledgement
10580
Sesssion Key Request
10720
Session Key Acknowledgement
10740
VPN Request
10760
Controller
Authenticated VPN Request
10780
VPN Acknowledgement
10920
Control Path Request
10940
Control Path Acknowledgement
10962
Configuration Information
10964
Configuration Acknowledgement
10966
Control and Monitoring Information
10968

FIG. 10B

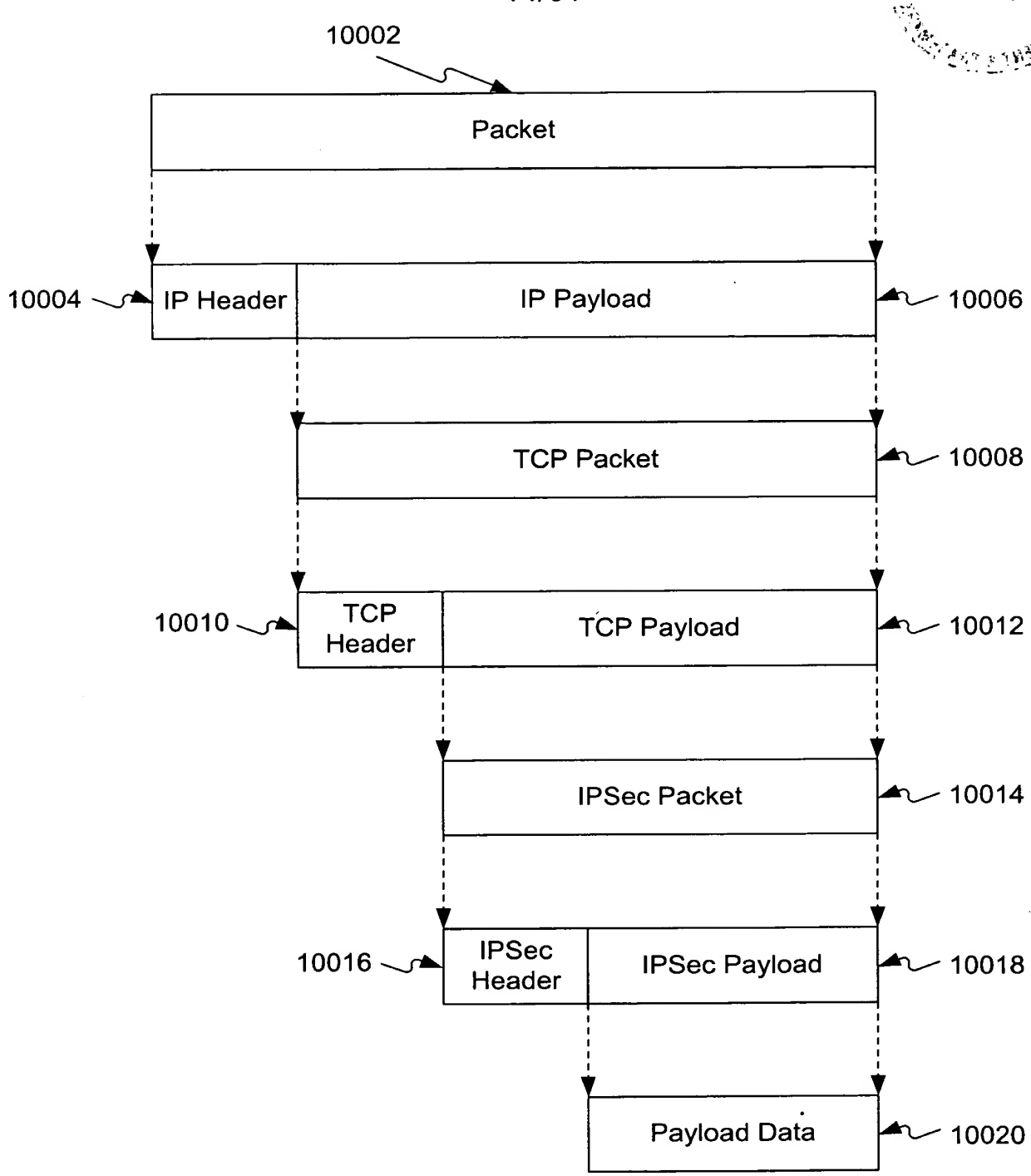
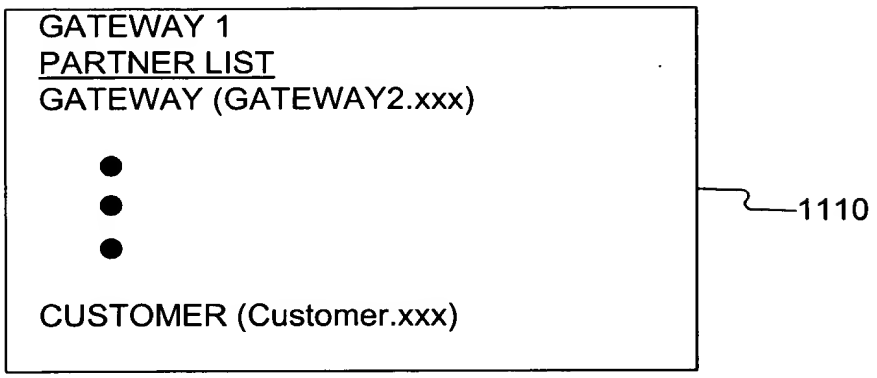

10002
Packet
10004
IP Header
IP Payload
10006
TCP Packet
10008
10010
TCP Header
TCP Payload
10012
IPSec Packet
10014
10016
IPSec Header
IPSec Payload
10018
Payload Data
10020

FIG. 10C


GATEWAY 1
PARTNER LIST
GATEWAY (GATEWAY2.xxx)
CUSTOMER (Customer.xxx)
1110

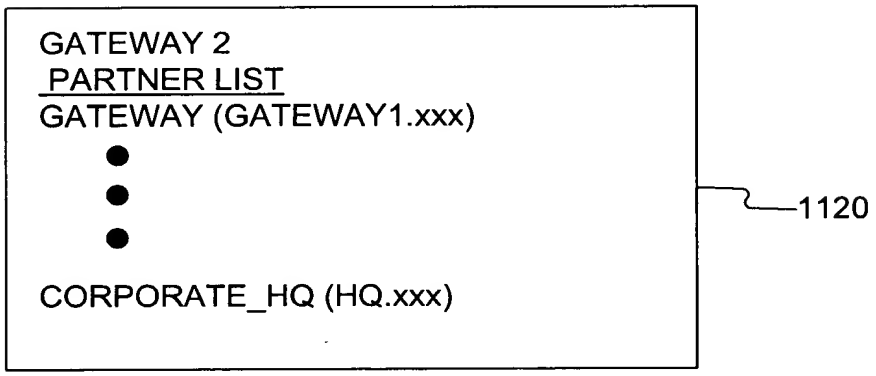

GATEWAY 2
PARTNER LIST
GATEWAY (GATEWAY1.xxx)
CORPORATE_HQ (HQ.xxx)
1120

FIG. 11A

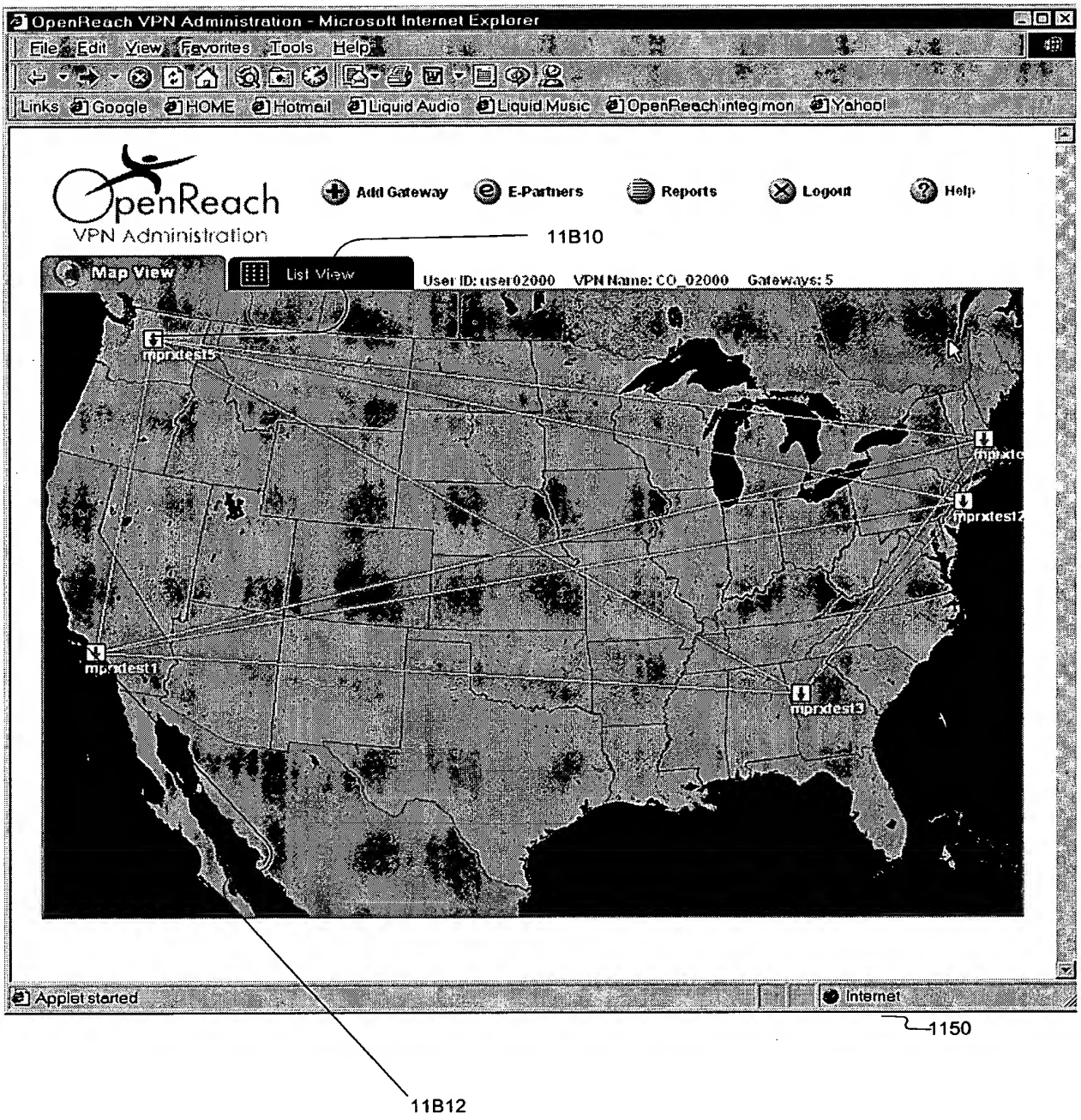

OpenReach VPN Administration - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Links Google HOME Hotmail Liquid Audio Liquid Music OpenReach integ mon Yahoo!
OpenReach
VPN Administration
Add Gateway
E-Partners
Reports
Logout
Help
11B10
Map View
List View
User ID: user02000 VPN Name: CO_02000 Gateways: 5
mprxtest5
mprxtest1
mprxtest3
Applet started
Internet
1150
11B12

FIG. 11B

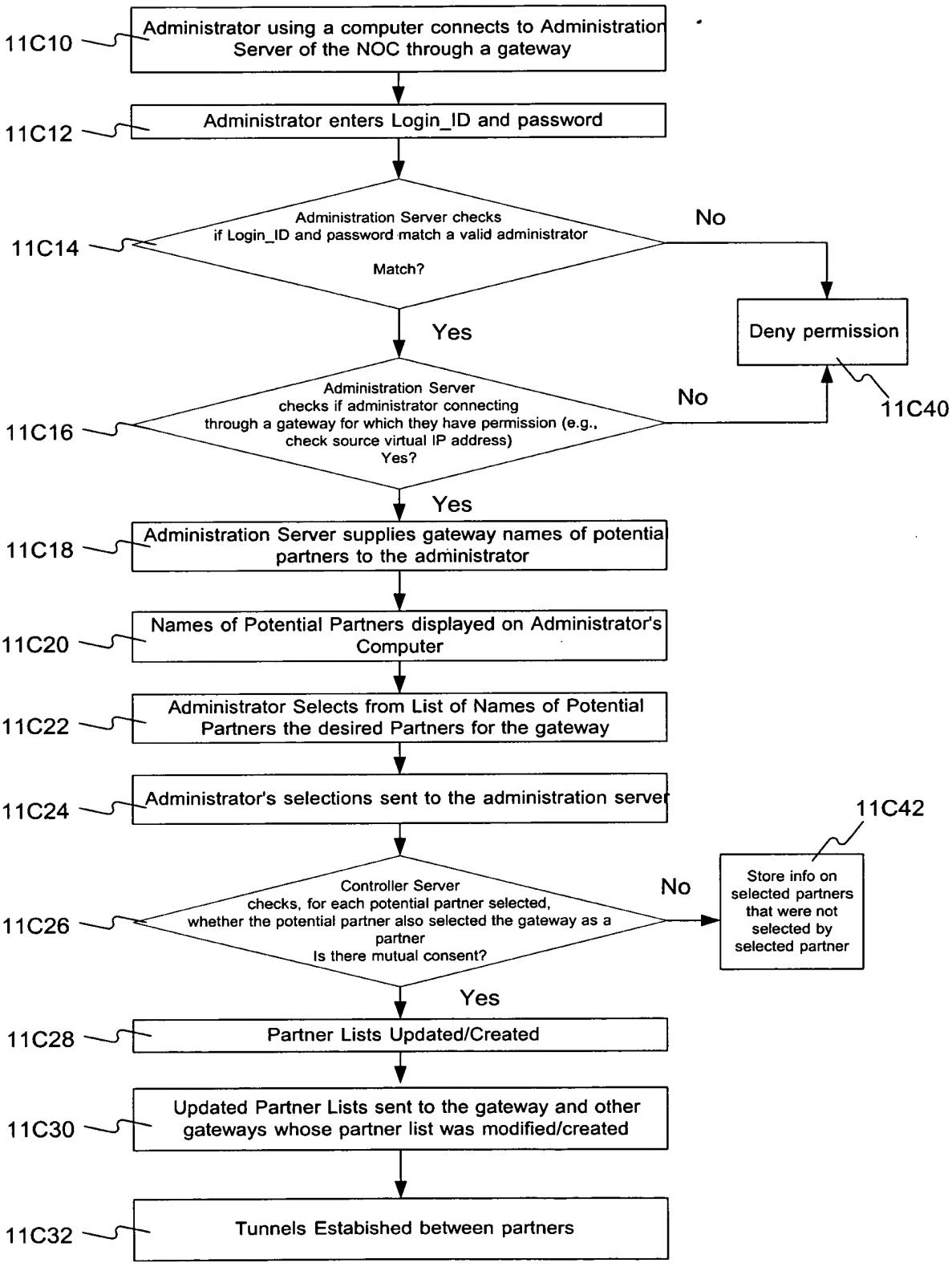

11C10
Administrator using a computer connects to Administration Server of the NOC through a gateway
11C12
Administrator enters Login_ID and password
11C14
Administration Server checks if Login_ID and password match a valid administrator
Match?
No
Deny permission
11C40
Yes
11C16
Administration Server checks if administrator connecting through a gateway for which they have permission (e.g., check source virtual IP address)
Yes?
No
Yes
11C18
Administration Server supplies gateway names of potentia partners to the administrator
11C20
Names of Potential Partners displayed on Administrator's Computer
11C22
Administrator Selects from List of Names of Potential Partners the desired Partners for the gateway
11C24
Administrator's selections sent to the administration server
11C42
11C26
Controller Server checks, for each potential partner selected, whether the potential partner also selected the gateway as a partner
Is there mutual consent?
No
Store info on selected partners that were not selected by selected partner
Yes
11C28
Partner Lists Updated/Created
11C30
Updated Partner Lists sent to the gateway and other gateways whose partner list was modified/created
11C32
Tunnels Estabished between partners

FIG. 11C

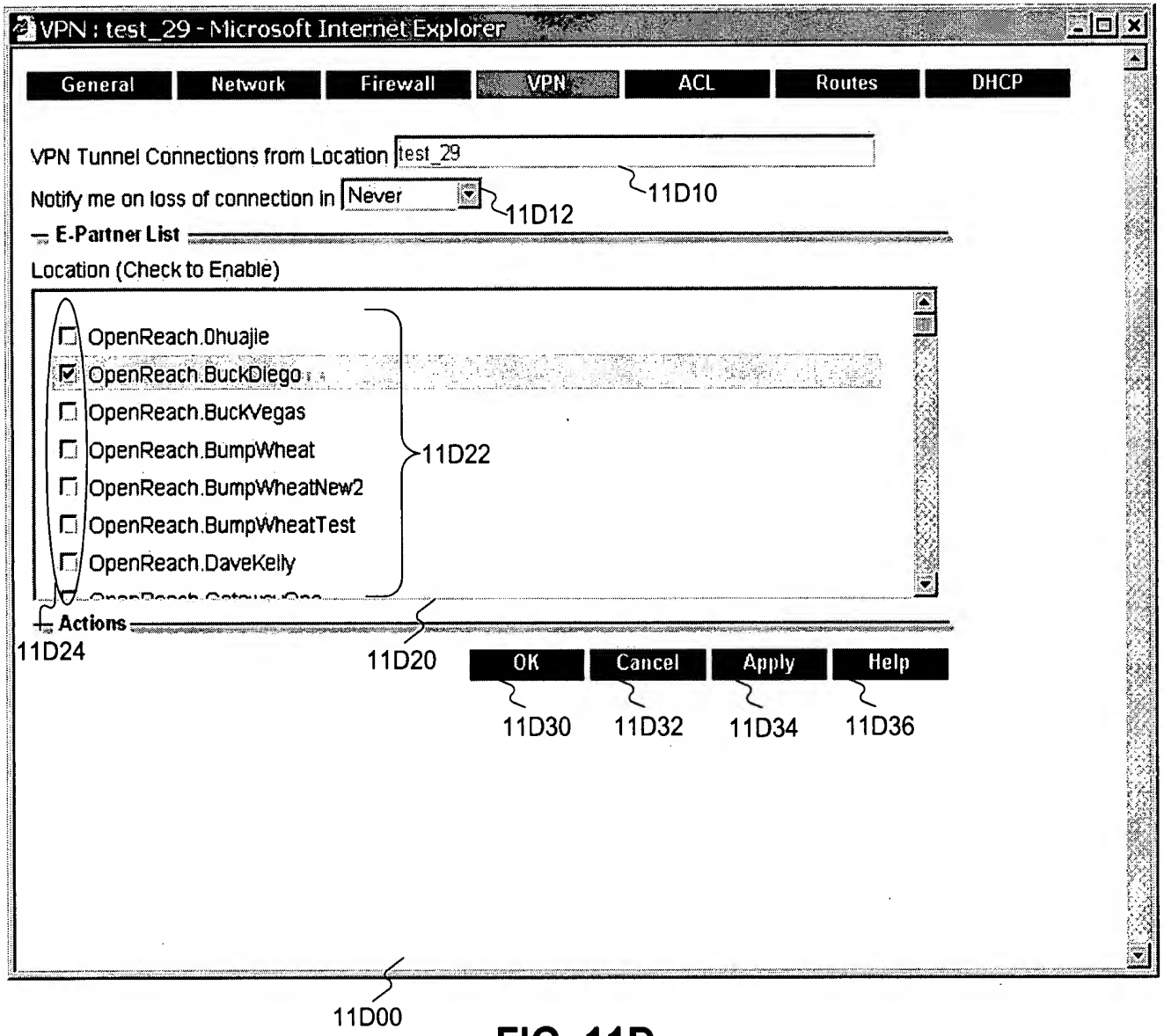

VPN : test_29 - Microsoft Internet Explorer
General
Network
Firewall
VPN
ACL
Routes
DHCP
VPN Tunnel Connections from Location
test_29
11D10
Notify me on loss of connection in
Never
11D12
E-Partner List
Location (Check to Enable)
OpenReach.Dhuajie
OpenReach.BuckDiego
OpenReach.BuckVegas
OpenReach.BumpWheat
OpenReach.BumpWheatNew2
OpenReach.BumpWheatTest
OpenReach.DaveKelly
11D22
Actions
11D24
11D20
OK
Cancel
Apply
Help
11D30
11D32
11D34
11D36
11D00

FIG. 11D

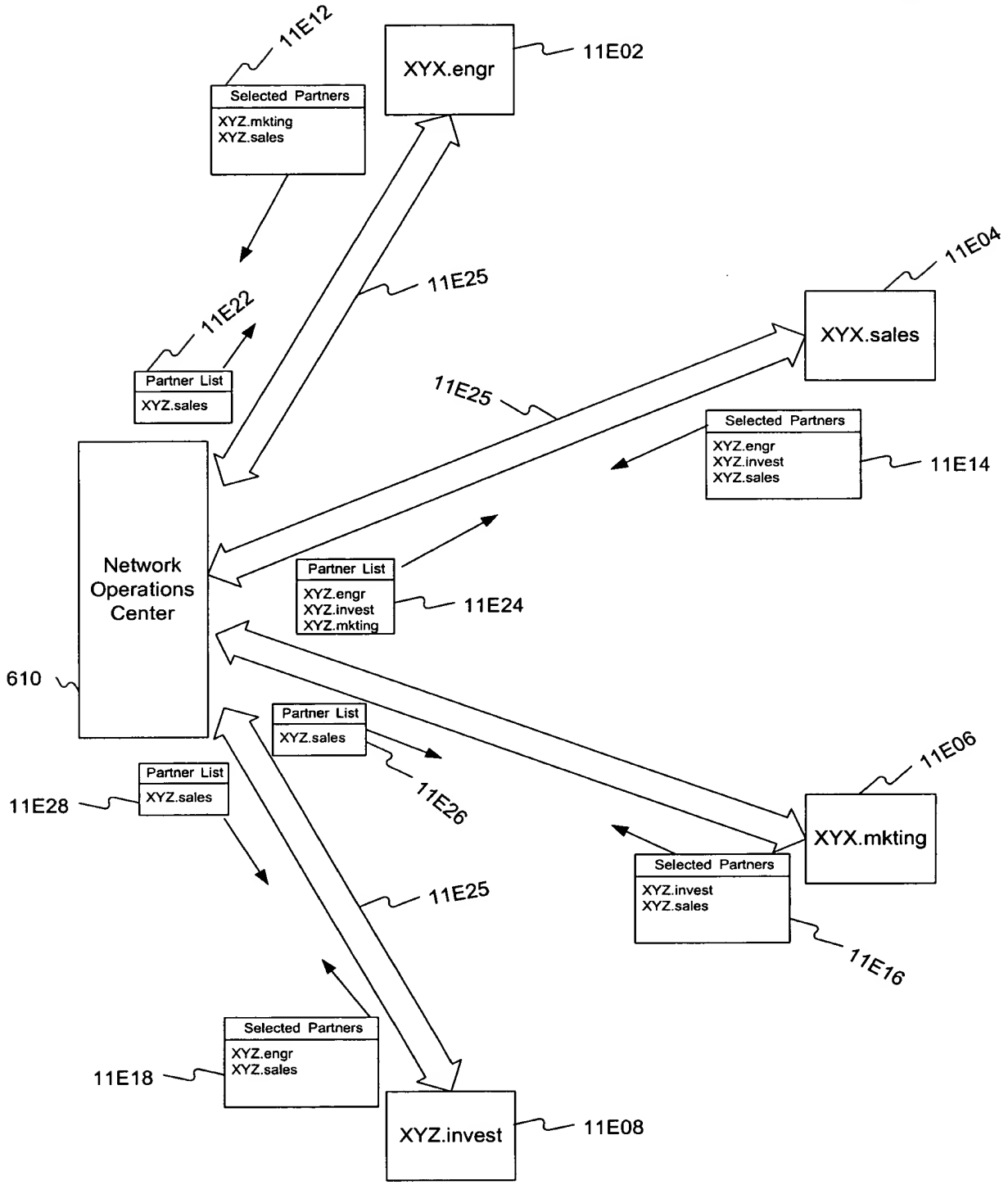

11E12
Selected Partners
XYZ.mkting
XYZ.sales
XYX.engr
11E02
11E22
Partner List
XYZ.sales
11E25
11E04
XYX.sales
11E25
Selected Partners
XYZ.engr
XYZ.invest
XYZ.sales
11E14
Network Operations Center
610
Partner List
XYZ.engr
XYZ.invest
XYZ.mkting
11E24
Partner List
XYZ.sales
11E26
11E28
Partner List
XYZ.sales
11E06
XYX.mkting
Selected Partners
XYZ.invest
XYZ.sales
11E16
11E25
Selected Partners
XYZ.engr
XYZ.sales
11E18
XYZ.invest
11E08

FIG. 11E

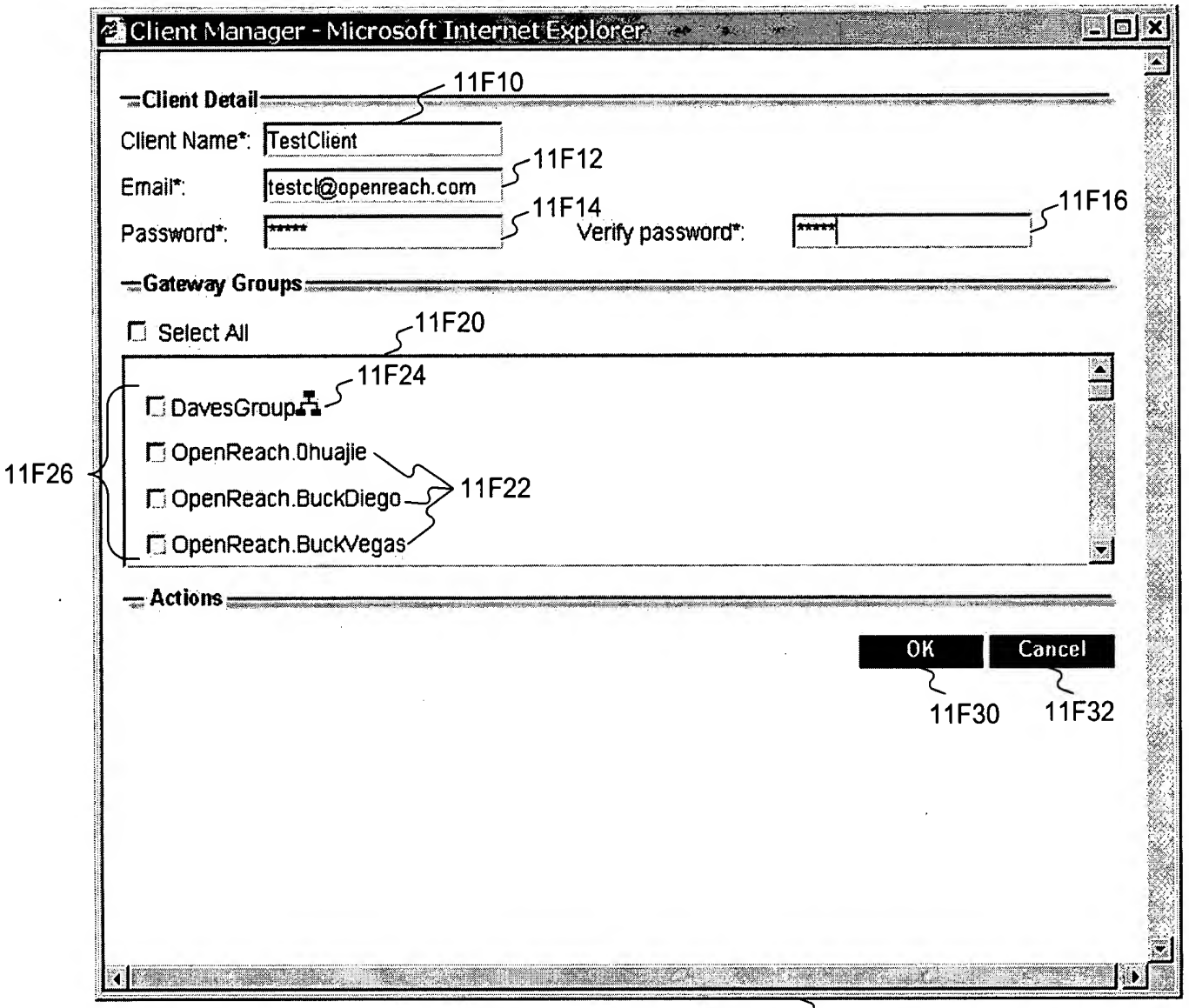

Client Manager - Microsoft Internet Explorer
Client Detail
11F10
Client Name*:
TestClient
11F12
Email*:
testcl@openreach.com
11F14
Password*:
*****
11F16
Verify password*:
*****
Gateway Groups
Select All
11F20
11F24
DavesGroup
OpenReach.Ohuajie
OpenReach.BuckDiego
OpenReach.BuckVegas
11F22
11F26
Actions
OK
Cancel
11F30
11F32
11F00

FIG. 11F

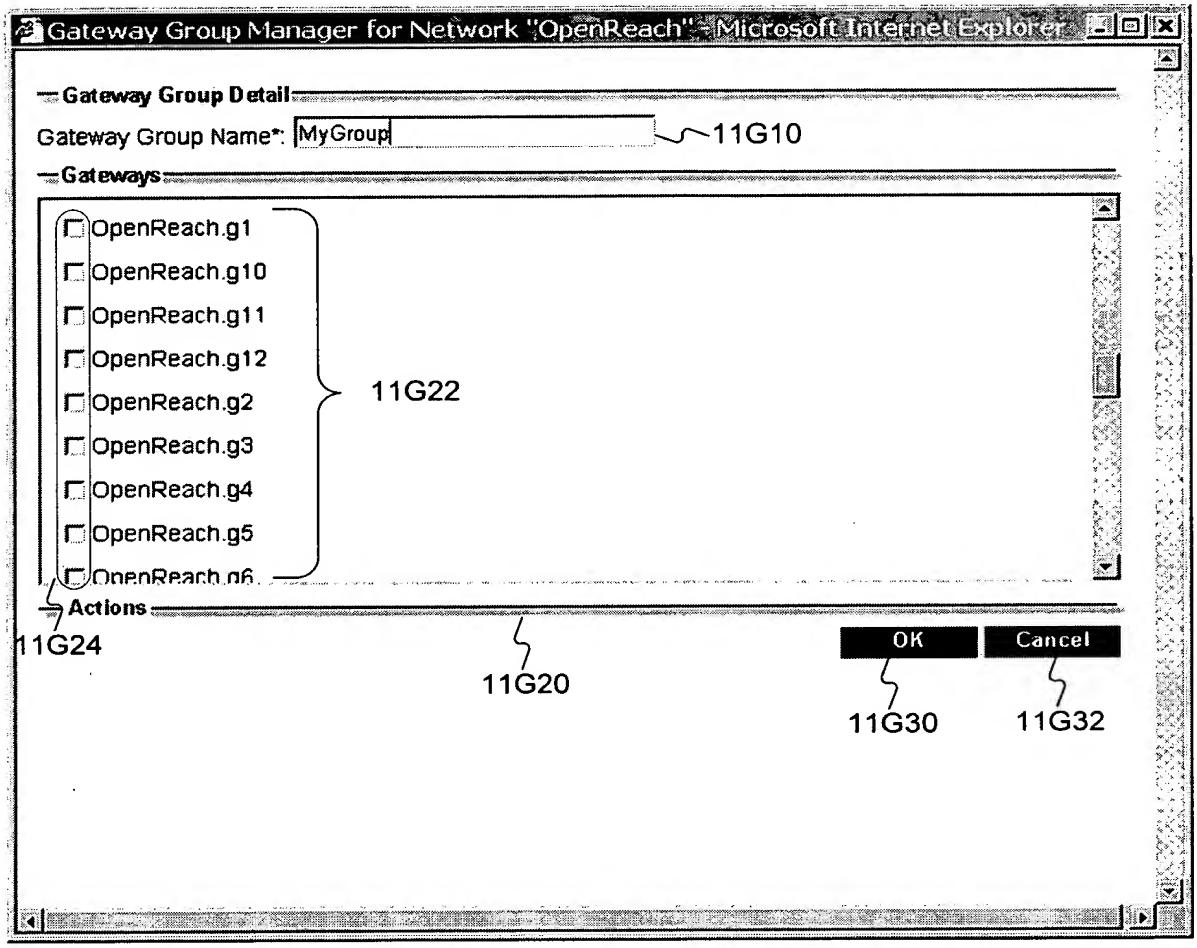

Gateway Group Manager for Network "OpenReach" - Microsoft Internet Explorer
Gateway Group Detail
Gateway Group Name*: MyGroup
11G10
Gateways
OpenReach.g1
OpenReach.g10
OpenReach.g11
OpenReach.g12
OpenReach.g2
OpenReach.g3
OpenReach.g4
OpenReach.g5
OpenReach.g6
11G22
Actions
11G24
11G20
OK
Cancel
11G30
11G32

FIG. 11G

Exhibit 1003 - Page 0061 of 0145

1210	<local computer information>	
	computer_name	="org5"
	domain_name	="bugwheat2"
	virtualip_address	="10.0.11.130"
	visibleip_address	="208.185.39.2"
	firewall_in_place	="no"
	network_config	="Inline"
	dns_from_dhcp	="no"
	dns_primary	="10.10.10.2"
	dns_secondary	="10.10.10.3"
	ProxyIp	="208.185.40.2"
	</local computer information>	
1212	<local interface information>	
	name	="eth0"
	mac_layer_address	="00:90:27:EE:02:3B"
	local_IP_address	="208.185.39.2"
	gateway	="208.185.39.1"
	subnet_mask	="255.255.255.0"
	dhcp	="none"
	</local interface information>	
1214	<local_LAN_Information><address_range>	
	startip_address_range	="208.185.49.1"
	endip_address_range	="208.185.49.255"
	type	="included"
	gateway	=""
	</address_range> </local_LAN_Information>	
1216	<cryptographic key>	
	kind	="PublicKey"
	type	="NOC's_Primary_Key"
	format	="RSA"
	encryption	="3DES"
	modulus	="0x ... 01"
	modulus_bits	="1024"
	public_exp	="0x03"
	</cryptographic key>	
1218	<firewall rule>	
	protocol="tcp"	
	direction="in"	
	src_ip_mask="$any"	
	src_port="1024:65535"	
	dst_ip_mask="$1"	
	dst_port="21"	
	action="ACCEPT"	
	rule_number="1"	
	</firewall rule>	

FIG. 12

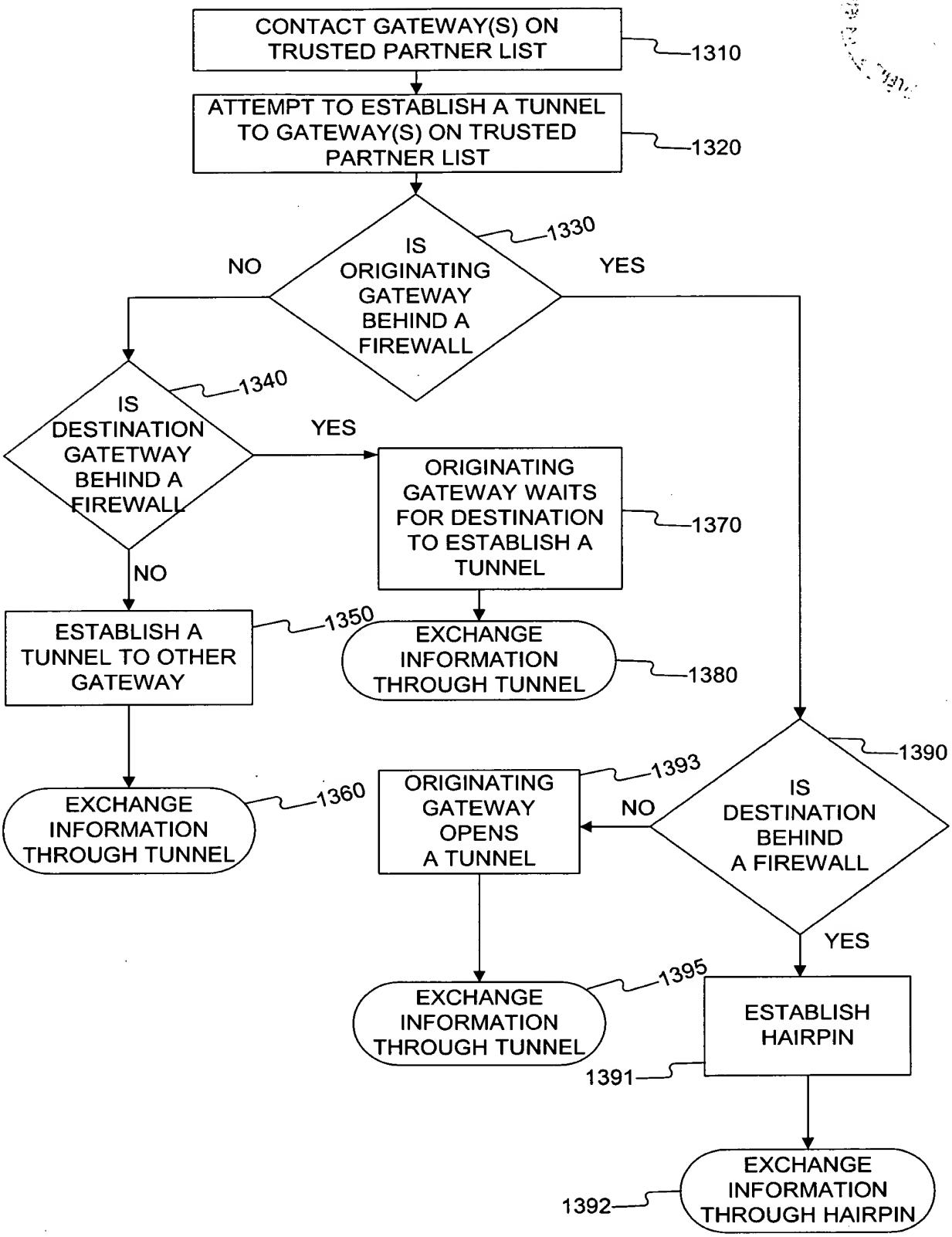

CONTACT GATEWAY(S) ON TRUSTED PARTNER LIST
1310
ATTEMPT TO ESTABLISH A TUNNEL TO GATEWAY(S) ON TRUSTED PARTNER LIST
1320
IS ORIGINATING GATEWAY BEHIND A FIREWALL
1330
NO
YES
IS DESTINATION GATETWAY BEHIND A FIREWALL
1340
YES
NO
ORIGINATING GATEWAY WAITS FOR DESTINATION TO ESTABLISH A TUNNEL
1370
ESTABLISH A TUNNEL TO OTHER GATEWAY
1350
EXCHANGE INFORMATION THROUGH TUNNEL
1380
EXCHANGE INFORMATION THROUGH TUNNEL
1360
ORIGINATING GATEWAY OPENS A TUNNEL
1393
IS DESTINATION BEHIND A FIREWALL
1390
NO
YES
EXCHANGE INFORMATION THROUGH TUNNEL
1395
ESTABLISH HAIRPIN
1391
EXCHANGE INFORMATION THROUGH HAIRPIN
1392

FIG. 13

TOETBO" 9hE2E860

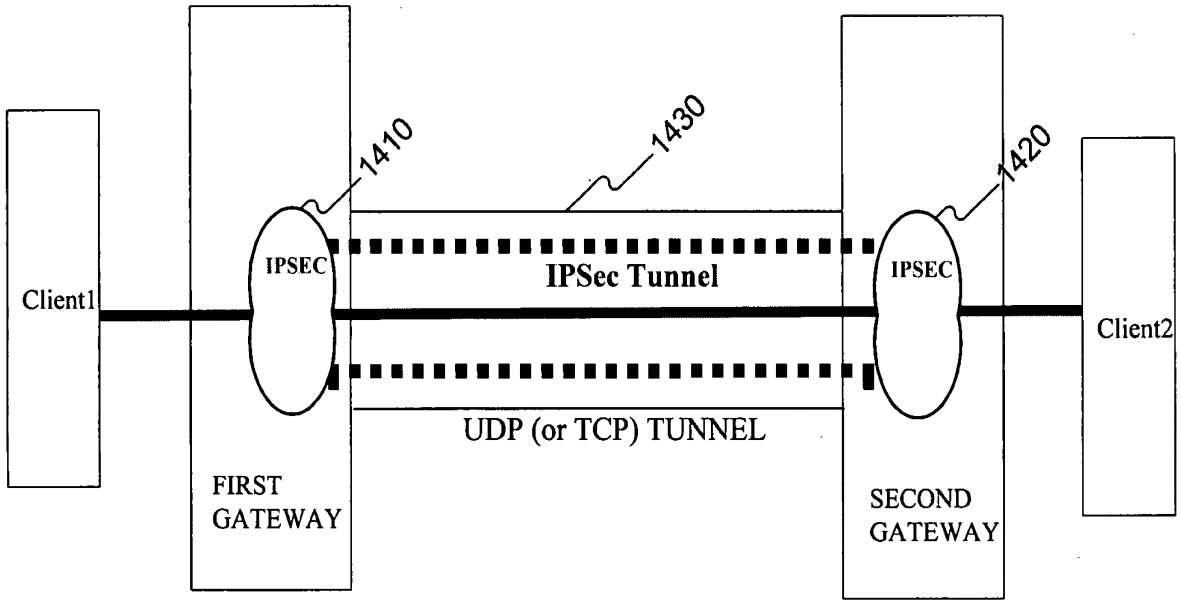


FIG. 14

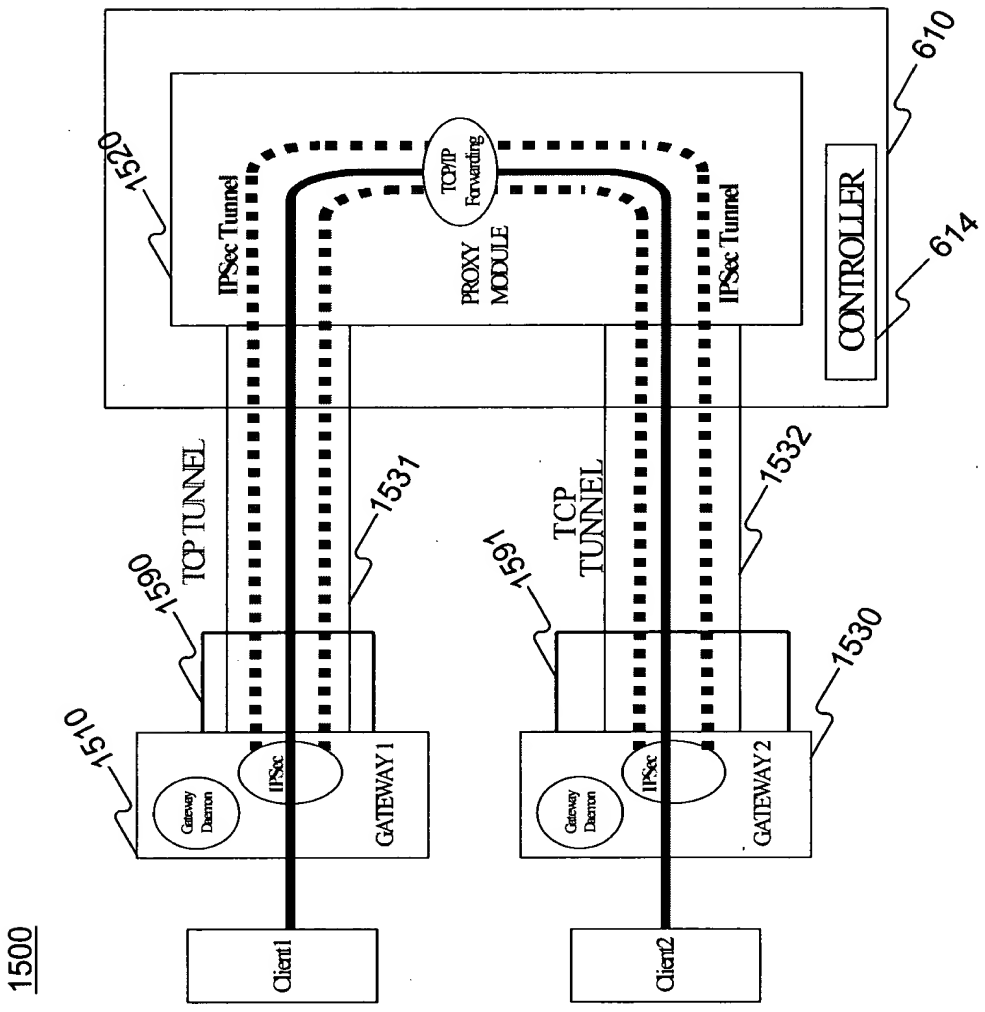

1500
Client1
Client2
Gateway Daemon
IPSec
GATEWAY1
GATEWAY2
1510
1530
1590
1591
TCP TUNNEL
1531
1532
1520
IPSec Tunnel
TCP/IP Forwarding
PROXY MODULE
610
CONTROLLER
614

FIG. 15A

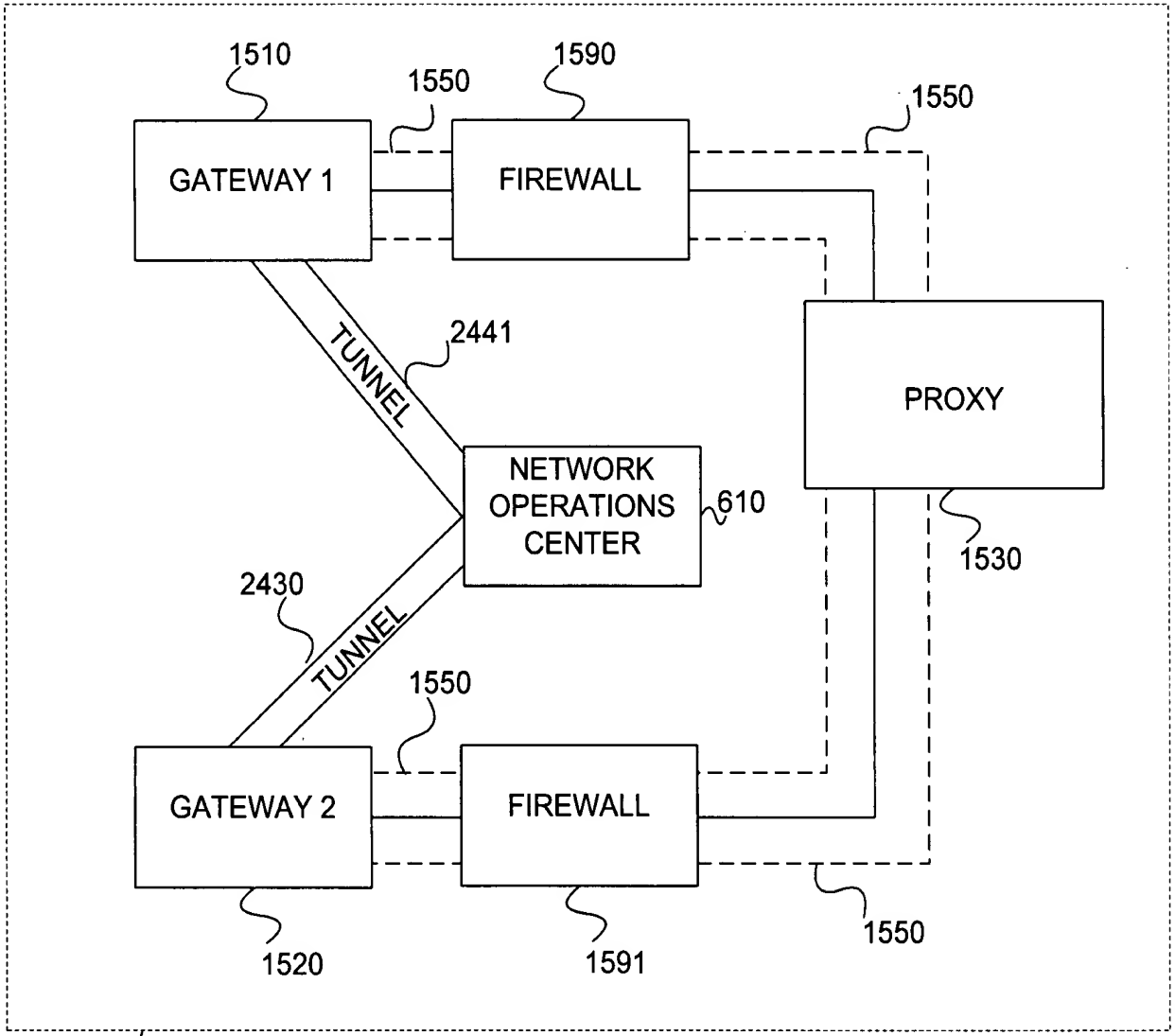

1510
1550
1590
1550
GATEWAY 1
FIREWALL
TUNNEL
2441
PROXY
NETWORK
OPERATIONS
CENTER
610
1530
2430
TUNNEL
1550
GATEWAY 2
FIREWALL
1550
1520
1591
2200

FIG. 15B

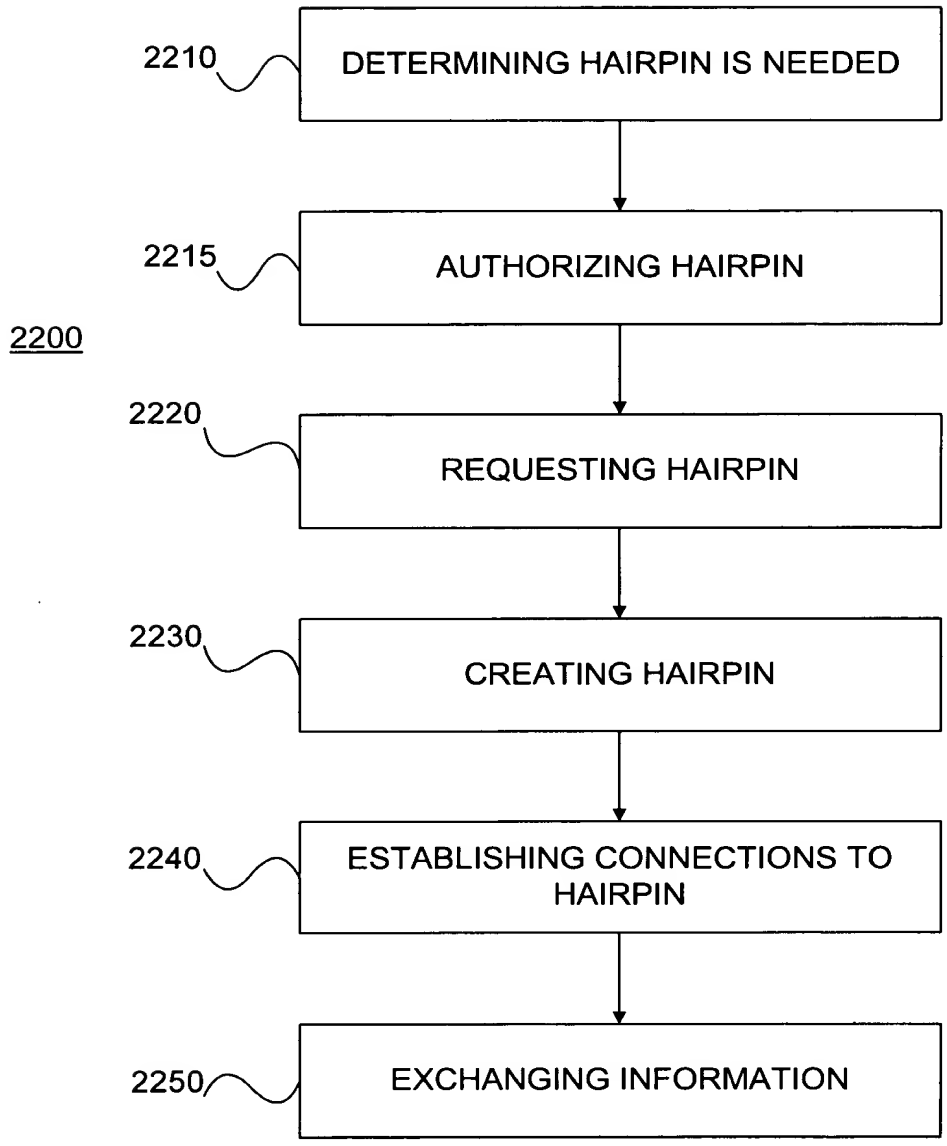

2200
2210
DETERMINING HAIRPIN IS NEEDED
2215
AUTHORIZING HAIRPIN
2220
REQUESTING HAIRPIN
2230
CREATING HAIRPIN
2240
ESTABLISHING CONNECTIONS TO HAIRPIN
2250
EXCHANGING INFORMATION

FIG. 15C

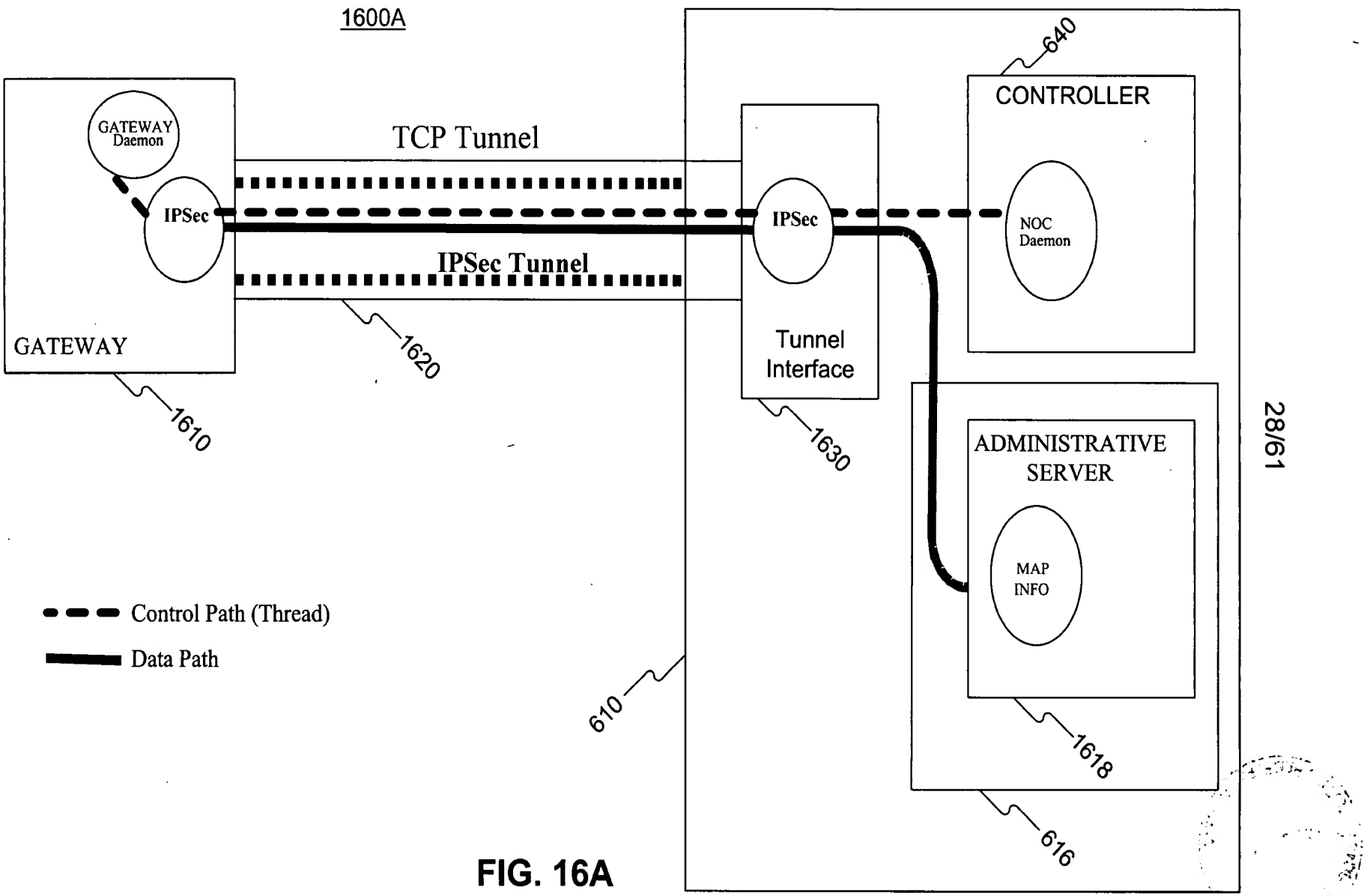

1600A
GATEWAY Daemon
IPSec
GATEWAY
1610
TCP Tunnel
IPSec Tunnel
1620
IPSec
Tunnel Interface
1630
640
CONTROLLER
NOC Daemon
ADMINISTRATIVE SERVER
MAP INFO
1618
616
610
Control Path (Thread)
Data Path

FIG. 16A

1600B

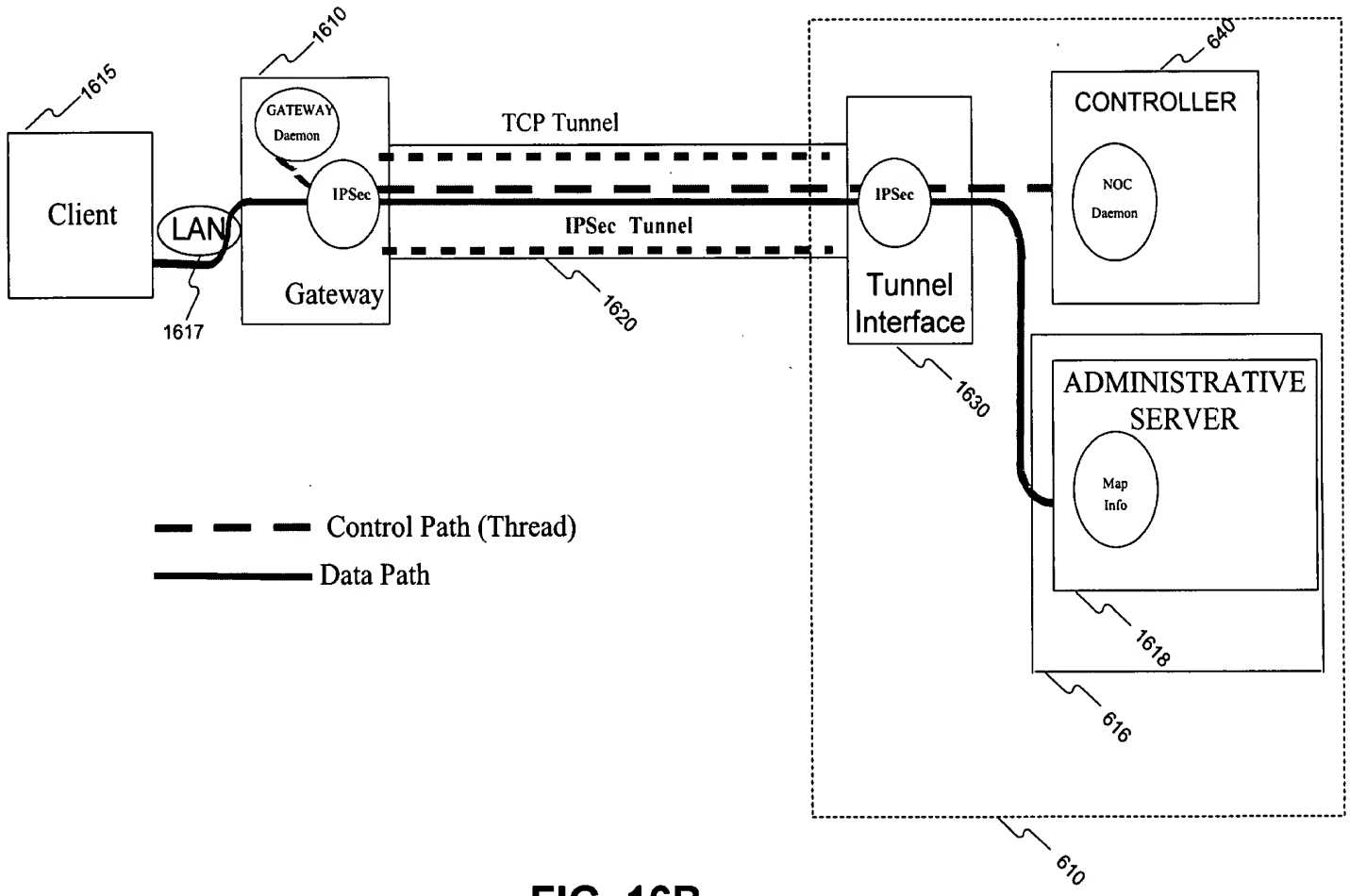


FIG. 16B

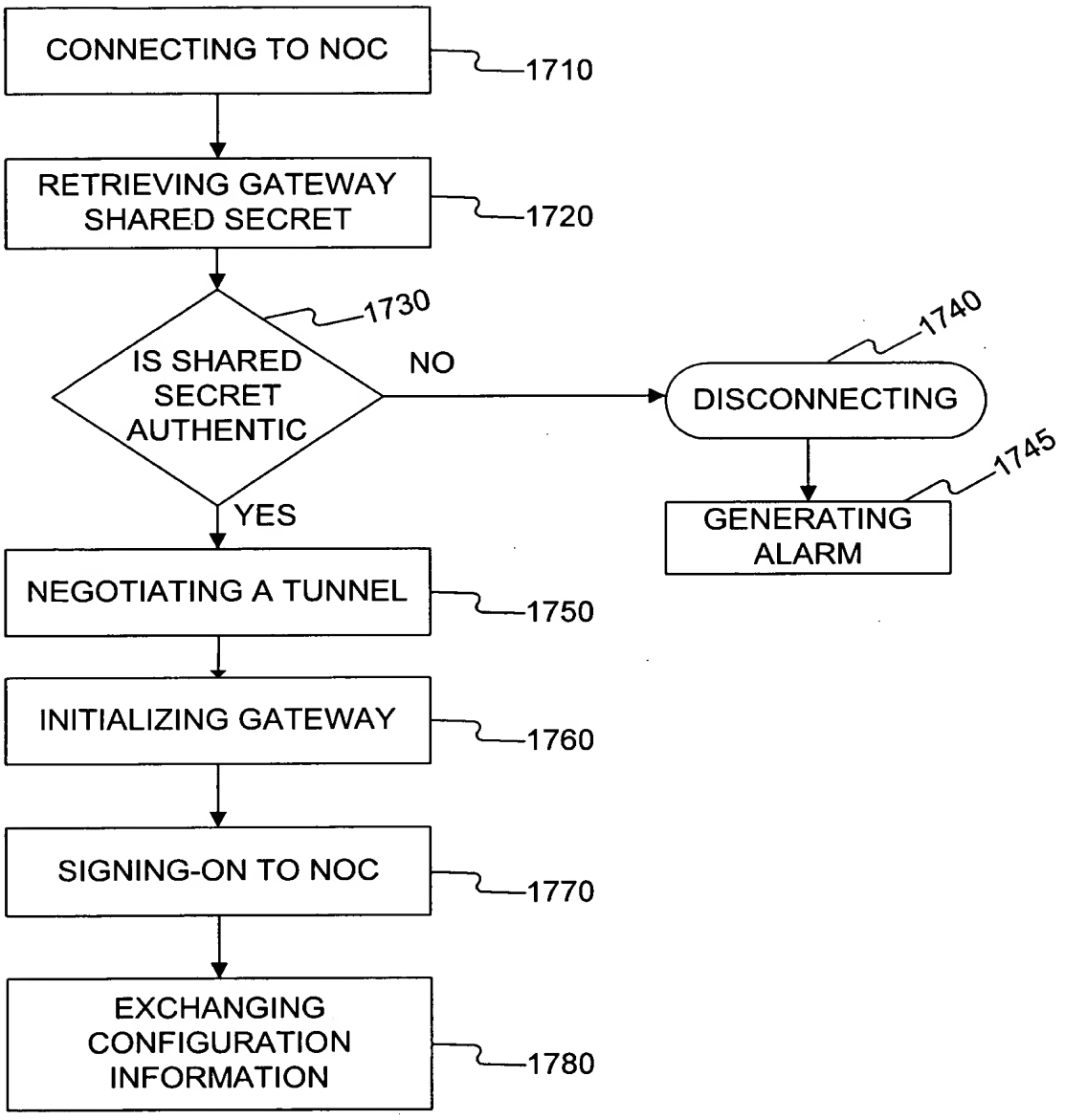

CONNECTING TO NOC
1710
RETRIEVING GATEWAY SHARED SECRET
1720
1730
IS SHARED SECRET AUTHENTIC
NO
1740
DISCONNECTING
1745
GENERATING ALARM
YES
NEGOTIATING A TUNNEL
1750
INITIALIZING GATEWAY
1760
SIGNING-ON TO NOC
1770
EXCHANGING CONFIGURATION INFORMATION
1780

FIG. 17

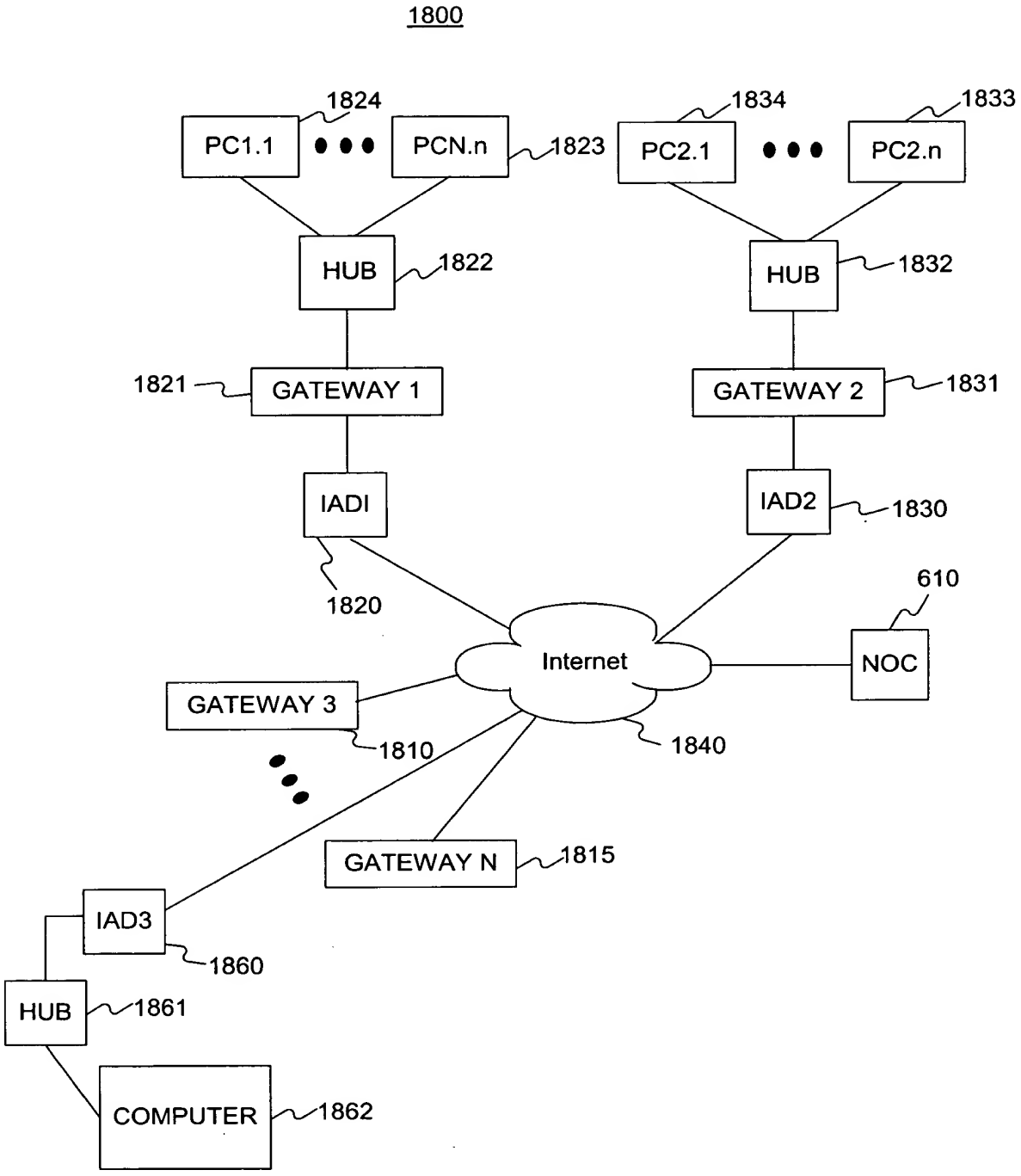

1800
1824
PC1.1
PCN.n
1823
1834
PC2.1
PC2.n
1833
HUB
1822
HUB
1832
1821
GATEWAY 1
GATEWAY 2
1831
IADI
IAD2
1830
1820
610
Internet
NOC
GATEWAY 3
1810
1840
GATEWAY N
1815
IAD3
1860
HUB
1861
COMPUTER
1862

FIG. 18

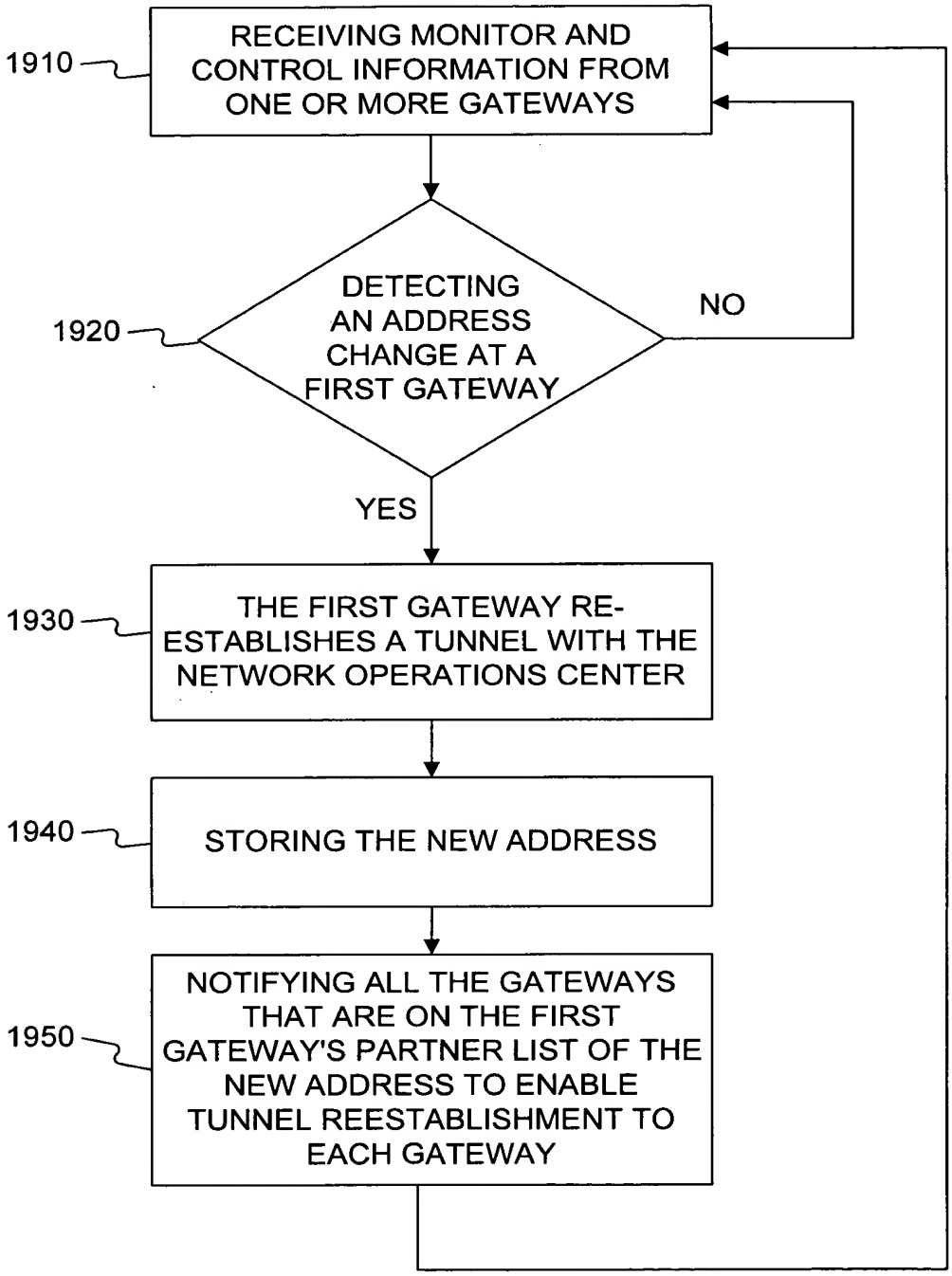


FIG. 19

EFS ID: 6971345
Document: 0098

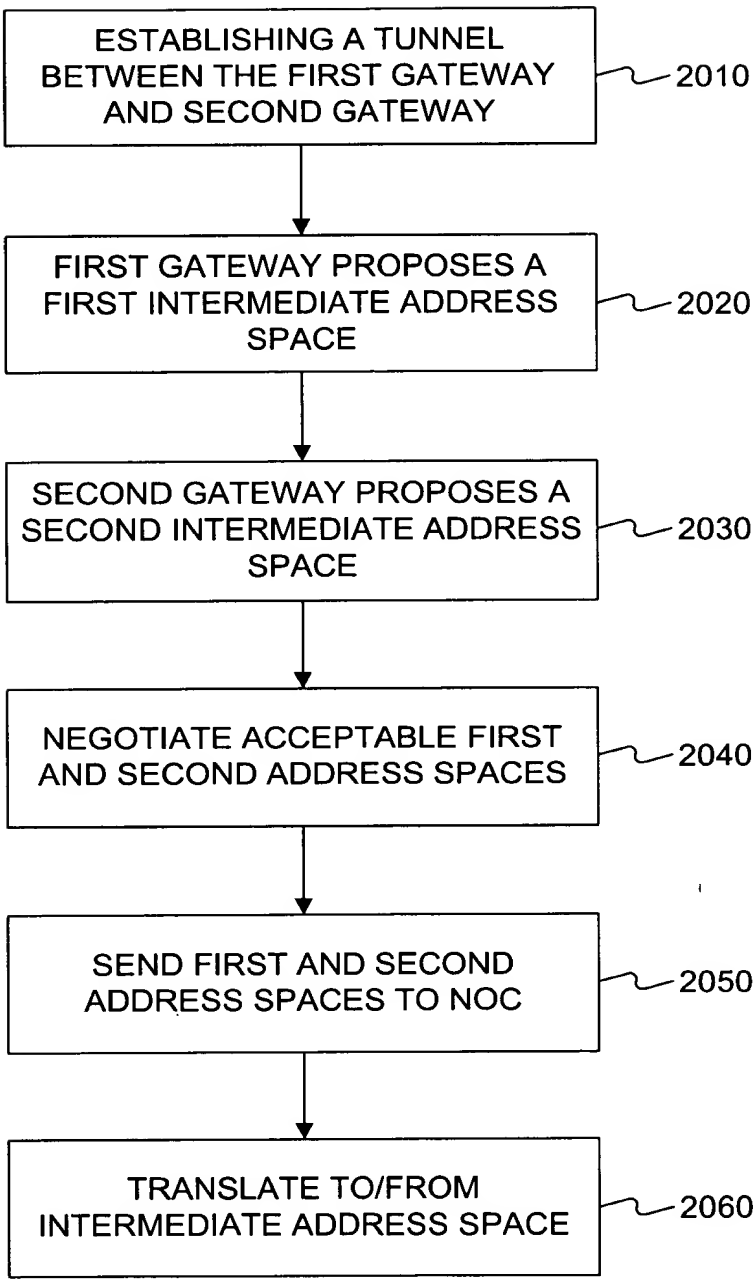

ESTABLISHING A TUNNEL BETWEEN THE FIRST GATEWAY AND SECOND GATEWAY
2010
FIRST GATEWAY PROPOSES A FIRST INTERMEDIATE ADDRESS SPACE
2020
SECOND GATEWAY PROPOSES A SECOND INTERMEDIATE ADDRESS SPACE
2030
NEGOTIATE ACCEPTABLE FIRST AND SECOND ADDRESS SPACES
2040
SEND FIRST AND SECOND ADDRESS SPACES TO NOC
2050
TRANSLATE TO/FROM INTERMEDIATE ADDRESS SPACE
2060

FIG. 20

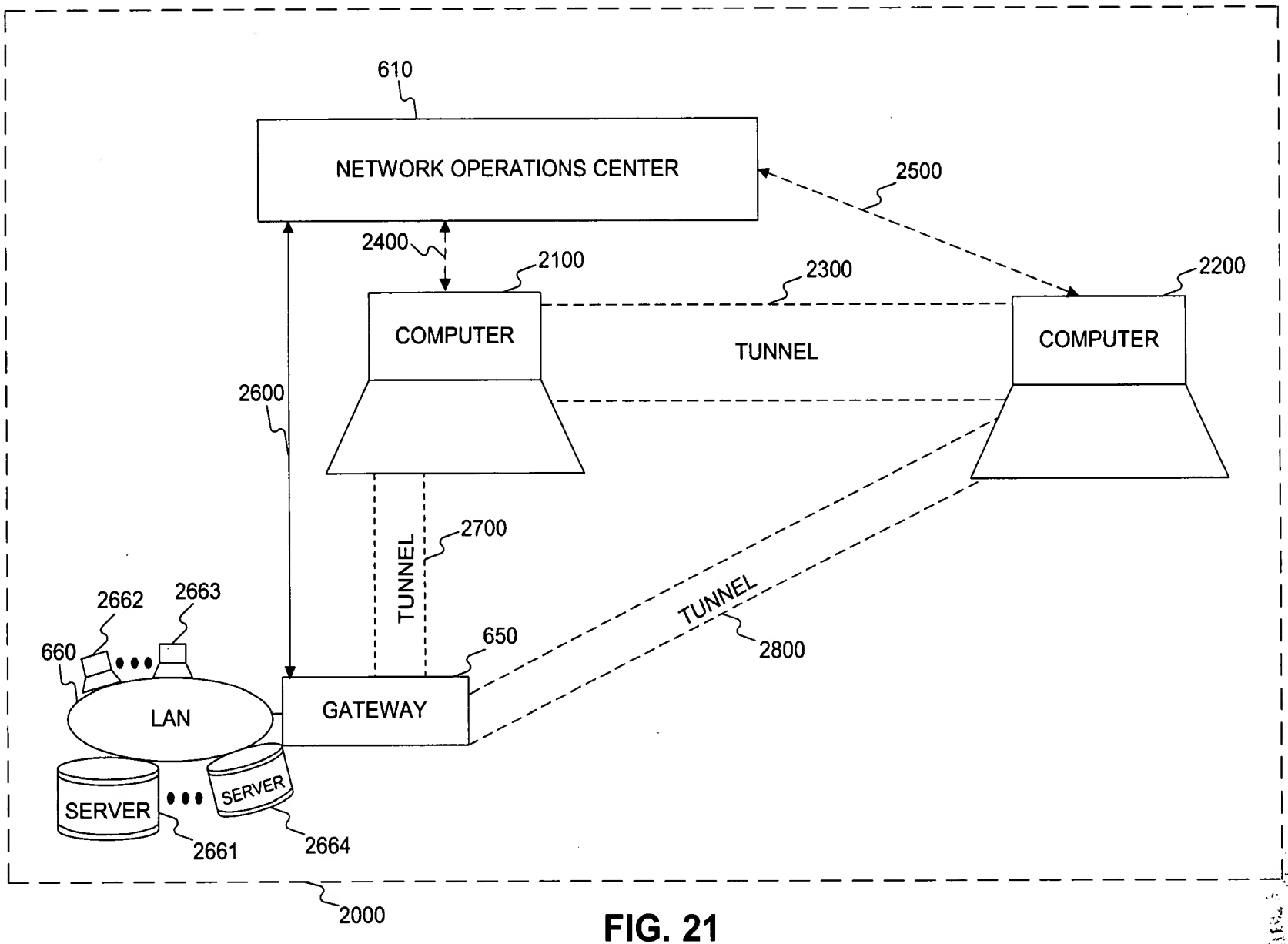

610
NETWORK OPERATIONS CENTER
2500
2400
2100
2300
2200
COMPUTER
TUNNEL
COMPUTER
2600
TUNNEL
2700
TUNNEL
2800
2662
2663
660
650
LAN
GATEWAY
SERVER
SERVER
2661
2664
2000

FIG. 21

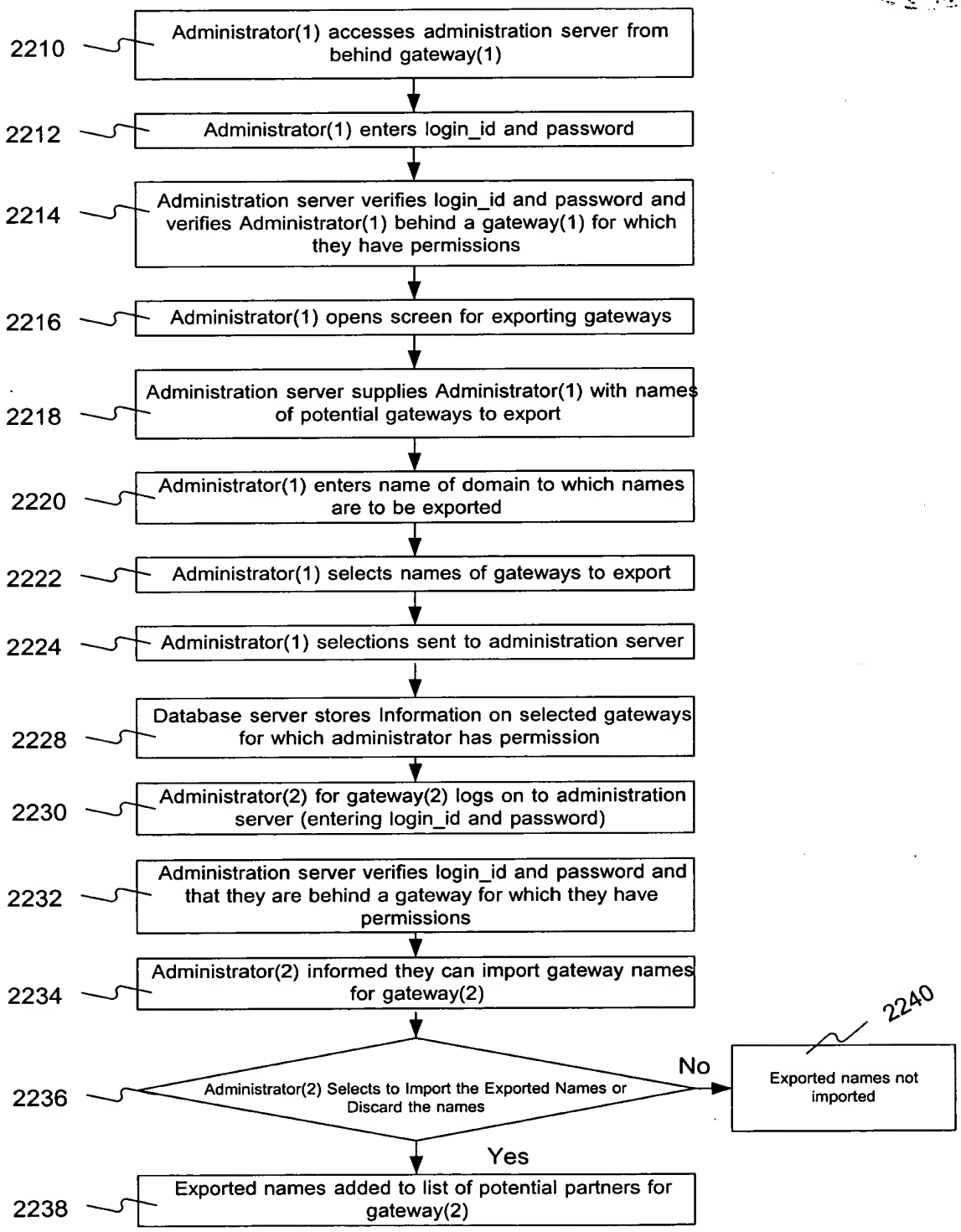

2210
Administrator(1) accesses administration server from behind gateway(1)
2212
Administrator(1) enters login_id and password
2214
Administration server verifies login_id and password and verifies Administrator(1) behind a gateway(1) for which they have permissions
2216
Administrator(1) opens screen for exporting gateways
2218
Administration server supplies Administrator(1) with names of potential gateways to export
2220
Administrator(1) enters name of domain to which names are to be exported
2222
Administrator(1) selects names of gateways to export
2224
Administrator(1) selections sent to administration server
2228
Database server stores Information on selected gateways for which administrator has permission
2230
Administrator(2) for gateway(2) logs on to administration server (entering login_id and password)
2232
Administration server verifies login_id and password and that they are behind a gateway for which they have permissions
2234
Administrator(2) informed they can import gateway names for gateway(2)
2236
Administrator(2) Selects to Import the Exported Names or Discard the names
No
2240
Exported names not imported
Yes
2238
Exported names added to list of potential partners for gateway(2)

FIG. 22

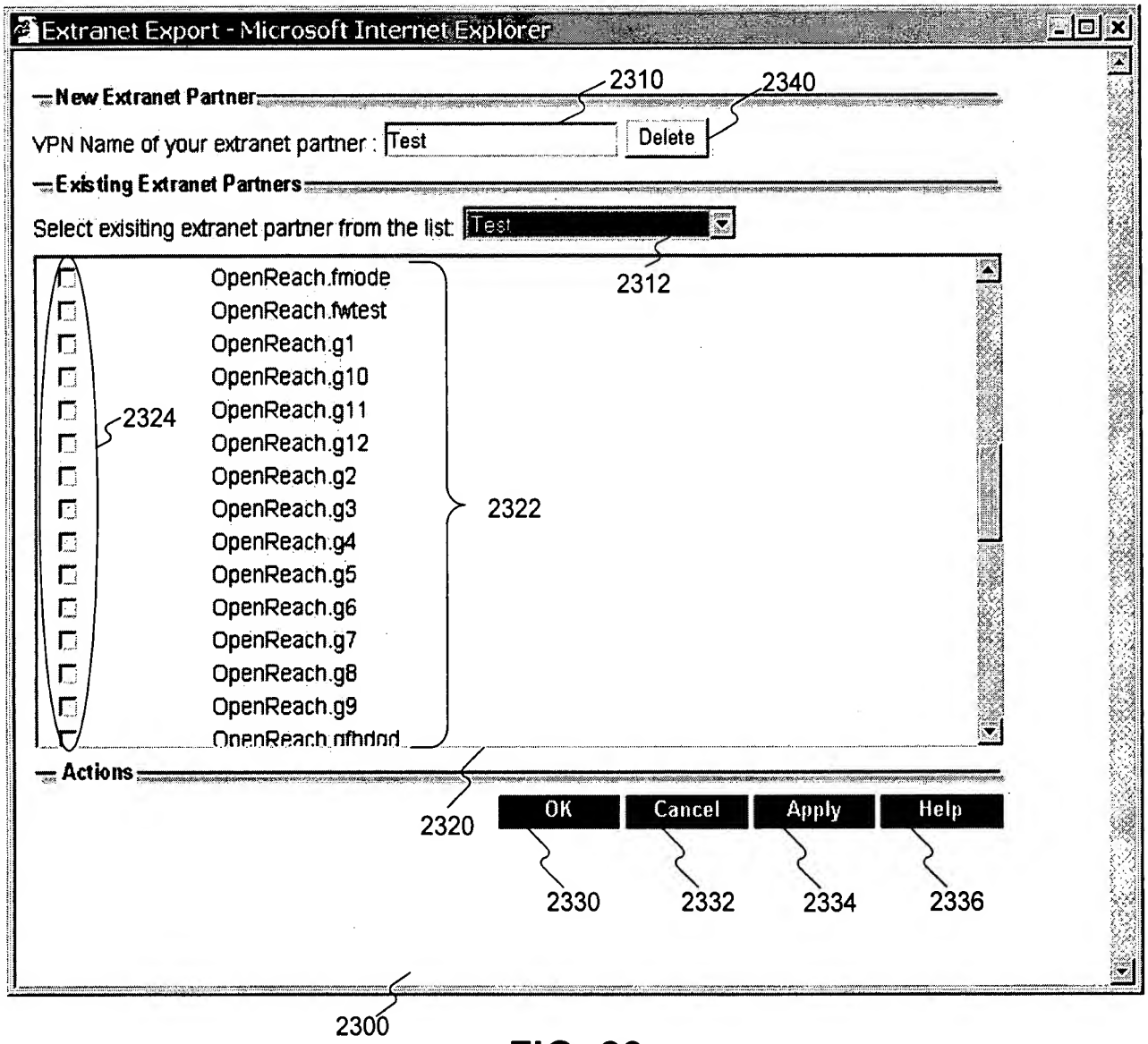

Extranet Export - Microsoft Internet Explorer
New Extranet Partner
2310
2340
VPN Name of your extranet partner :
Test
Delete
Existing Extranet Partners
Select exisiting extranet partner from the list:
Test
2312
OpenReach.fmode
OpenReach.fwtest
OpenReach.g1
OpenReach.g10
OpenReach.g11
OpenReach.g12
OpenReach.g2
OpenReach.g3
OpenReach.g4
OpenReach.g5
OpenReach.g6
OpenReach.g7
OpenReach.g8
OpenReach.g9
2324
2322
Actions
2320
OK
Cancel
Apply
Help
2330
2332
2334
2336
2300

FIG. 23

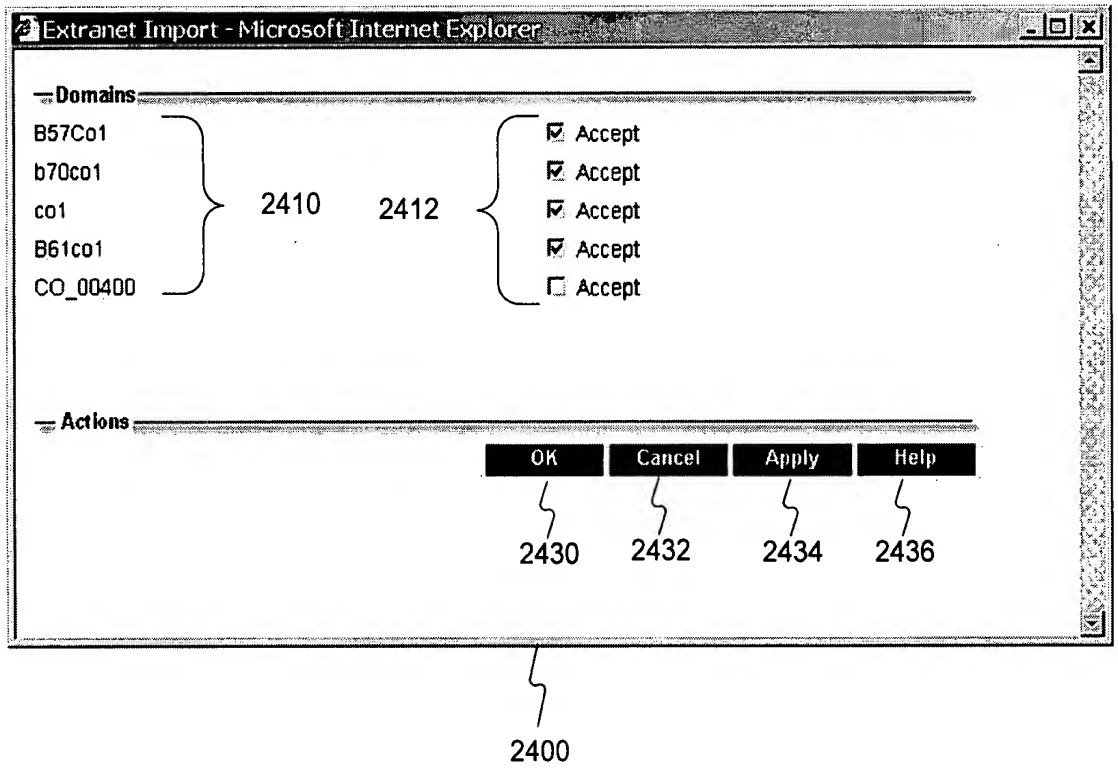

Extranet Import - Microsoft Internet Explorer
Domains
B57Co1
b70co1
co1
B61co1
CO_00400
2410
2412
Accept
Accept
Accept
Accept
Accept
Actions
OK
Cancel
Apply
Help
2430
2432
2434
2436
2400

FIG. 24

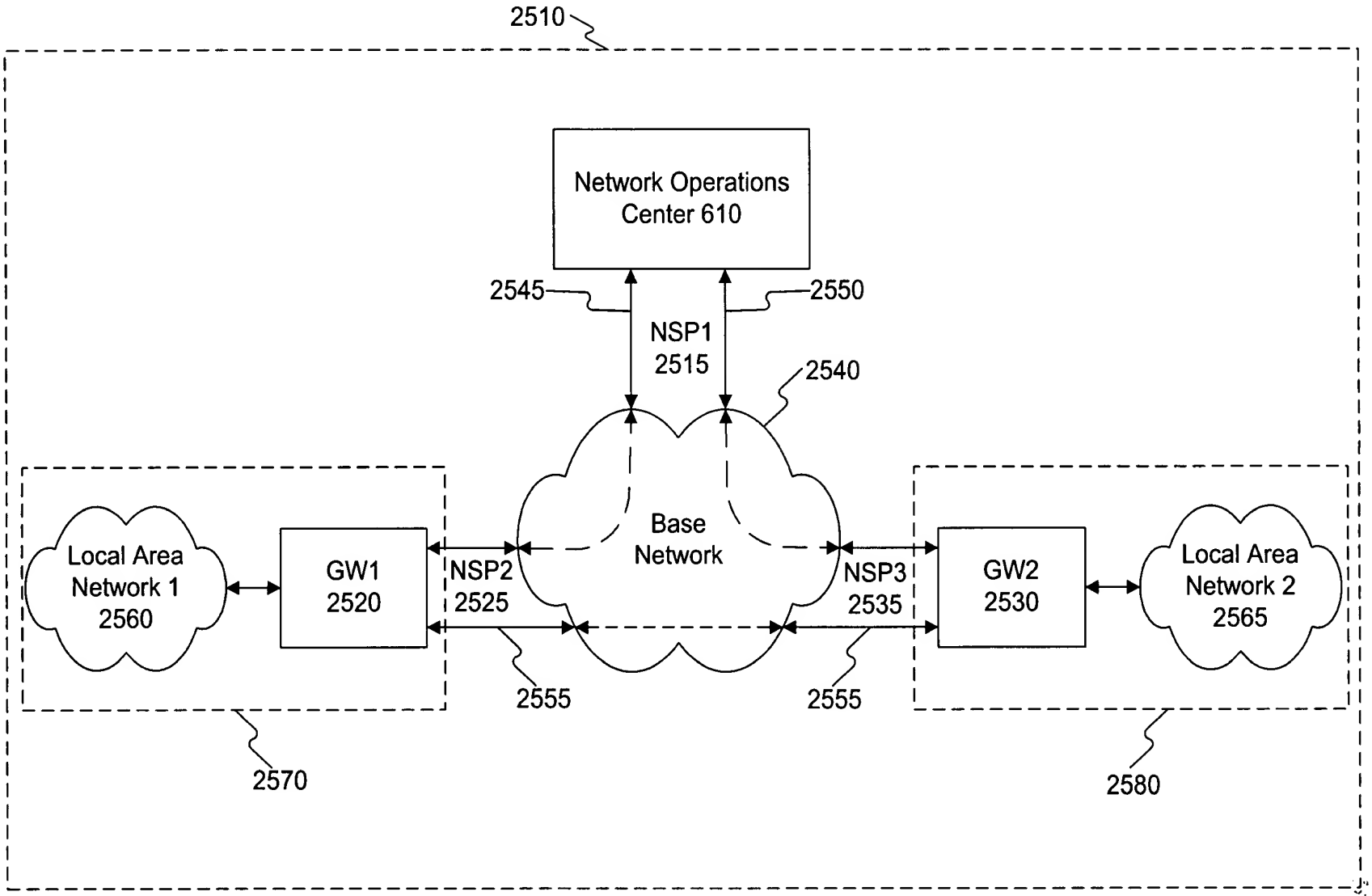

2510
Network Operations Center 610
2545
2550
NSP1
2515
2540
Base Network
Local Area Network 1
2560
GW1
2520
NSP2
2525
NSP3
2535
GW2
2530
Local Area Network 2
2565
2555
2555
2570
2580

FIG. 25

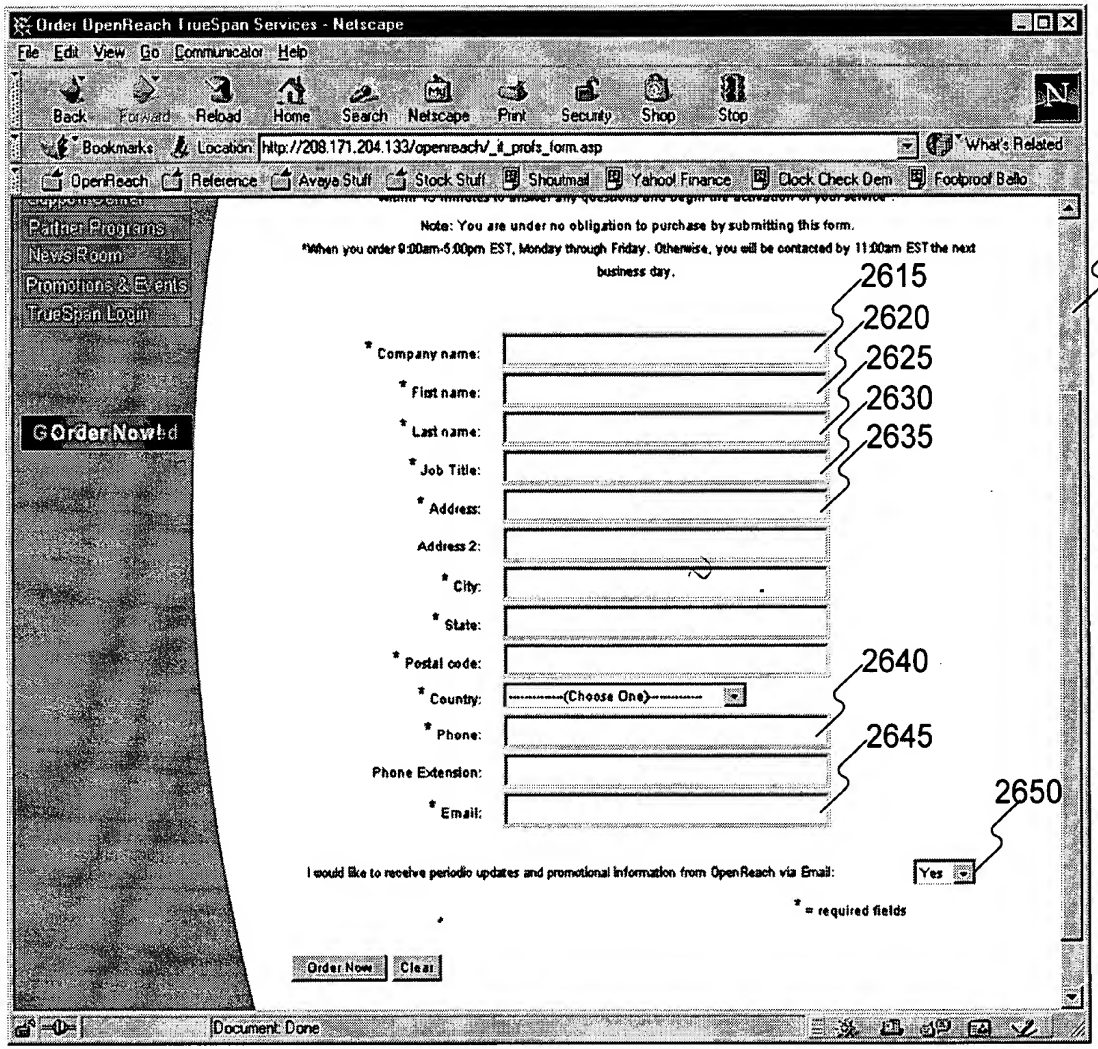

Order OpenReach TrueSpan Services - Netscape
File Edit View Go Communicator Help
Back Forward Reload Home Search Netscape Print Security Shop Stop
Bookmarks Location: http://208.171.204.133/openreach/_it_profs_form.asp
What's Related
OpenReach Reference Avaya Stuff Stock Stuff Shoutmail Yahoo! Finance Clock Check Dem Foolproof Ballo
Partner Programs
News Room
Promotions & Events
TrueSpan Login
Order Now
Note: You are under no obligation to purchase by submitting this form.
*When you order 9:00am-5:00pm EST, Monday through Friday. Otherwise, you will be contacted by 11:00am EST the next business day.
2610
2615
2620
2625
2630
2635
* Company name:
* First name:
* Last name:
* Job Title:
* Address:
Address 2:
* City:
* State:
* Postal code:
2640
* Country: ----------(Choose One)----------
* Phone:
2645
Phone Extension:
* Email:
2650
I would like to receive periodic updates and promotional information from OpenReach via Email: Yes
* = required fields
Order Now Clear
Document: Done

FIG. 26

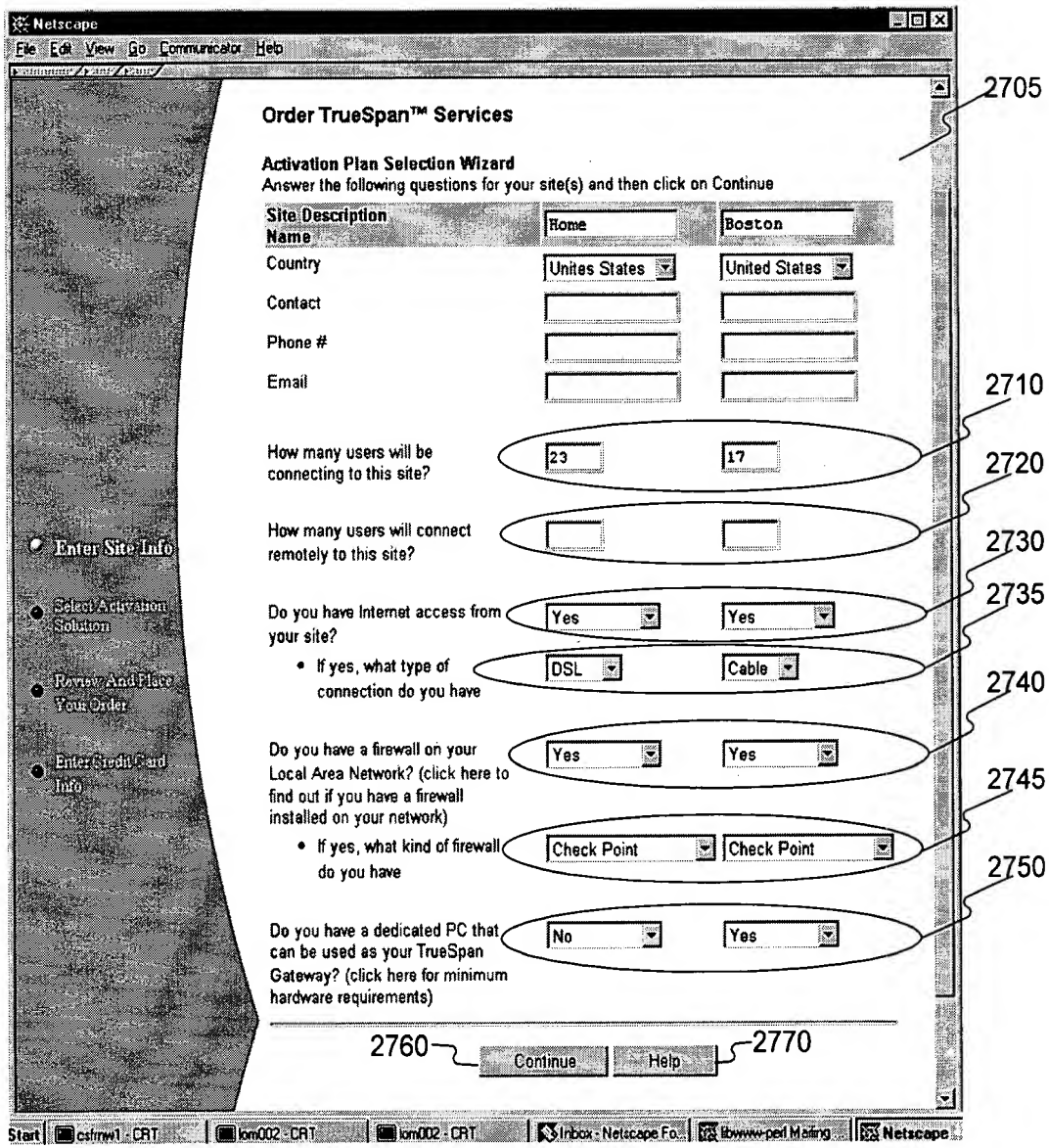

Netscape
File Edit View Go Communicator Help
Order TrueSpan™ Services
Activation Plan Selection Wizard
Answer the following questions for your site(s) and then click on Continue
Site Description Name
Rome
Boston
Country
Unites States
United States
Contact
Phone #
Email
How many users will be connecting to this site?
23
17
How many users will connect remotely to this site?
Do you have Internet access from your site?
Yes
Yes
• If yes, what type of connection do you have
DSL
Cable
Do you have a firewall on your Local Area Network? (click here to find out if you have a firewall installed on your network)
Yes
Yes
• If yes, what kind of firewall do you have
Check Point
Check Point
Do you have a dedicated PC that can be used as your TrueSpan Gateway? (click here for minimum hardware requirements)
No
Yes
Continue
Help
Enter Site Info
Select Activation Solution
Review And Place Your Order
Enter Credit Card Info
2705
2710
2720
2730
2735
2740
2745
2750
2760
2770

FIG. 27

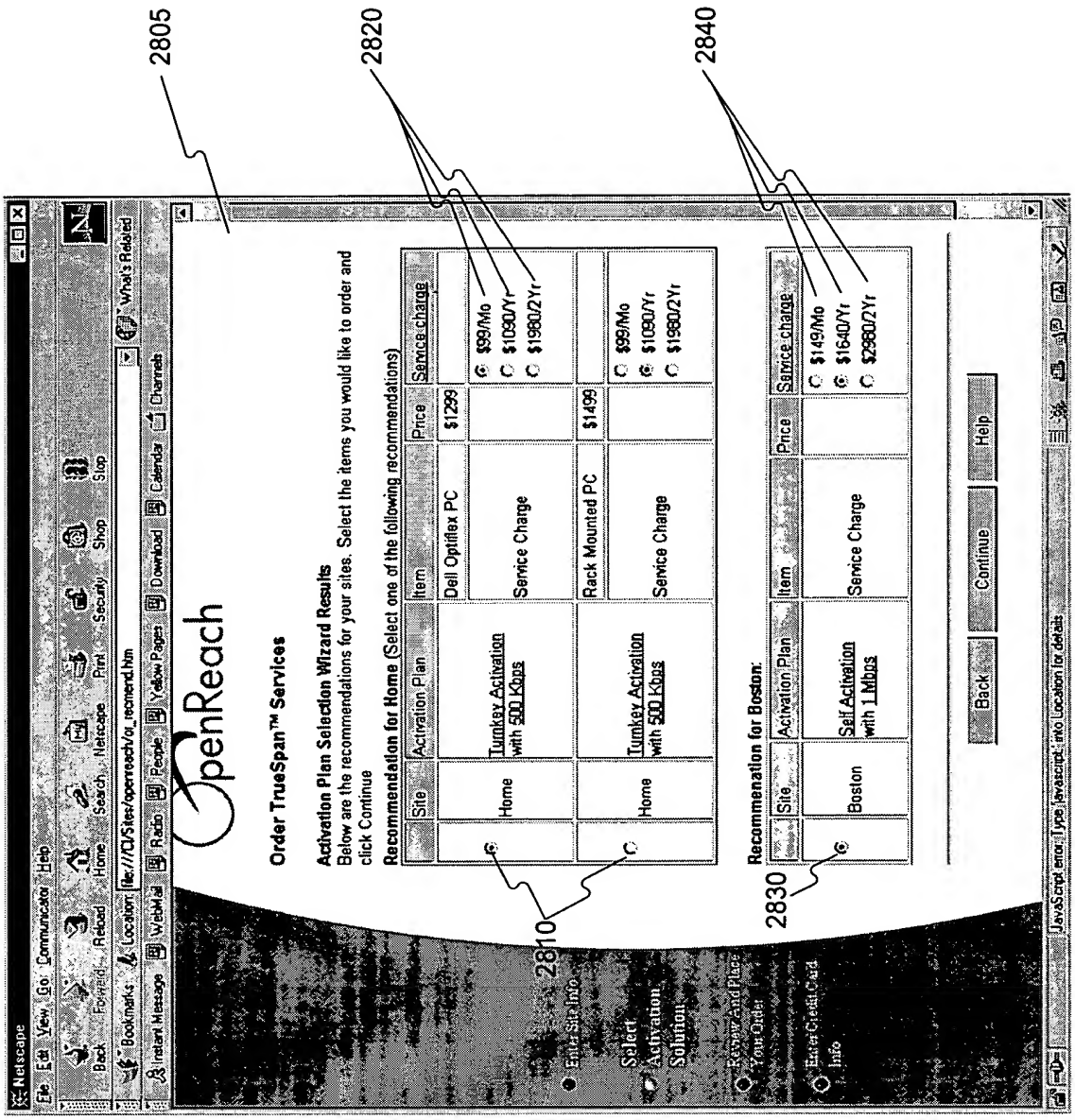

2805
2820
2840
2810
2830
Netscape
File Edit View Go Communicator Help
Back Forward Reload Home Search Netscape Print Security Shop Stop
Bookmarks Location: file:///D|/Sites/openreach/o_recmend.htm
Instant Message WebMail Radio People Yellow Pages Download Calendar Channels What's Related
OpenReach
Order TrueSpan™ Services
Activation Plan Selection Wizard Results
Below are the recommendations for your sites. Select the items you would like to order and click Continue
Recommendation for Home (Select one of the following recommendations)
Site
Activation Plan
Item
Price
Service charge
Home
Turnkey Activation with 500 Kbps
Dell Optiflex PC
$1299
Service Charge
$99/Mo
$1090/Yr
$1980/2Yr
Home
Turnkey Activation with 500 Kbps
Rack Mounted PC
$1499
Service Charge
$99/Mo
$1090/Yr
$1980/2Yr
Recommendation for Boston:
Site
Activation Plan
Item
Price
Service charge
Boston
Self Activation with 1 Mbps
Service Charge
$149/Mo
$1640/Yr
$2980/2Yr
Back
Continue
Help
Enter Site Info
Select Activation Solution
Review And Place Your Order
Enter Credit Card Info
JavaScript error: [type Javascript: into Location for details

FIG. 28

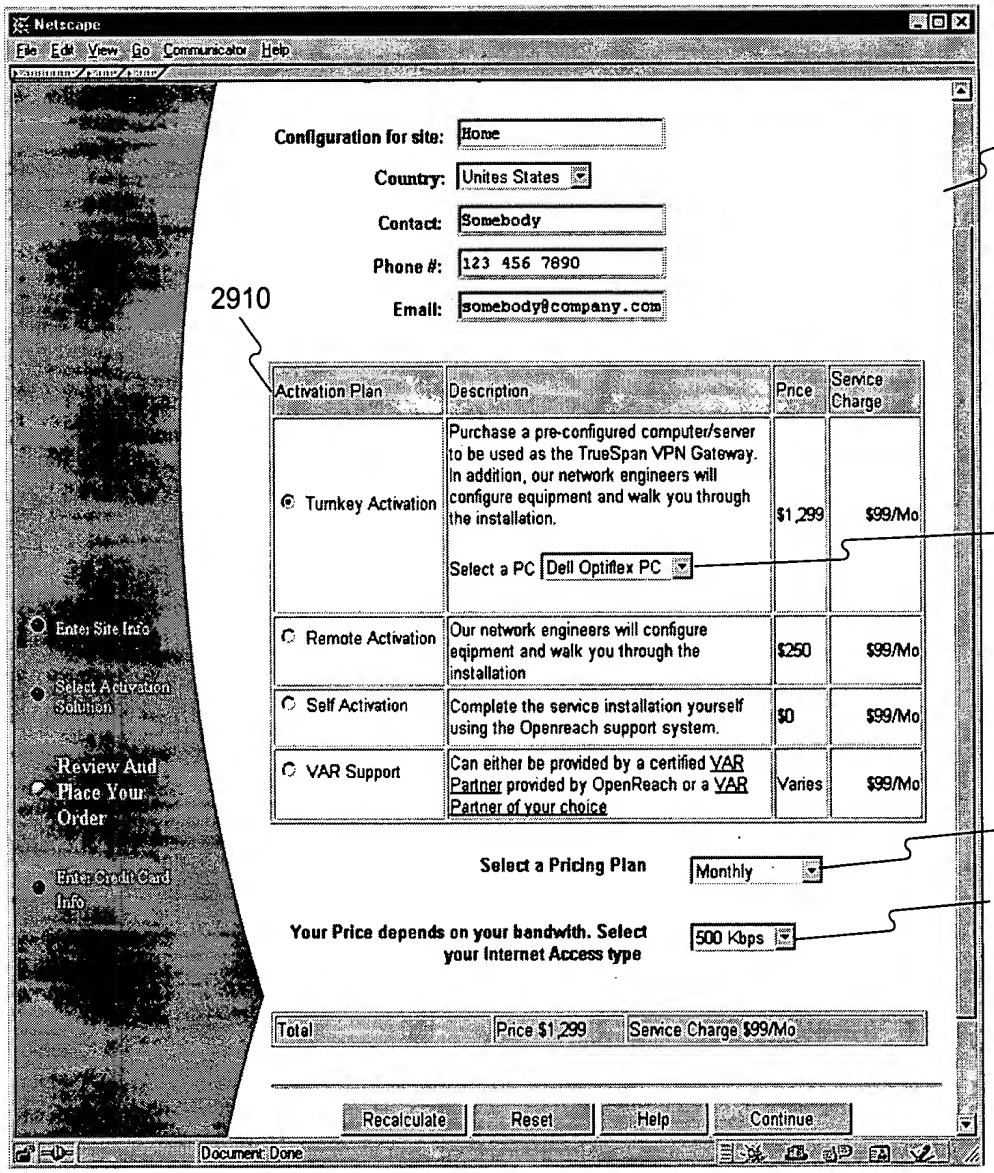

Netscape
File Edit View Go Communicator Help
Configuration for site: Home
Country: Unites States
Contact: Somebody
Phone #: 123 456 7890
Email: somebody@company.com
2905
2910
Activation Plan
Description
Price
Service Charge
Turnkey Activation
Purchase a pre-configured computer/server to be used as the TrueSpan VPN Gateway. In addition, our network engineers will configure equipment and walk you through the installation.
$1,299
$99/Mo
Select a PC Dell Optiflex PC
2920
Remote Activation
Our network engineers will configure eqipment and walk you through the installation
$250
$99/Mo
Self Activation
Complete the service installation yourself using the Openreach support system.
$0
$99/Mo
VAR Support
Can either be provided by a certified VAR Partner provided by OpenReach or a VAR Partner of your choice
Varies
$99/Mo
Enter Site Info
Select Activation Solution
Review And Place Your Order
Enter Credit Card Info
Select a Pricing Plan
Monthly
2930
Your Price depends on your bandwith. Select your Internet Access type
500 Kbps
2940
Total
Price $1,299
Service Charge $99/Mo
Recalculate
Reset
Help
Continue
Document: Done

FIG. 29

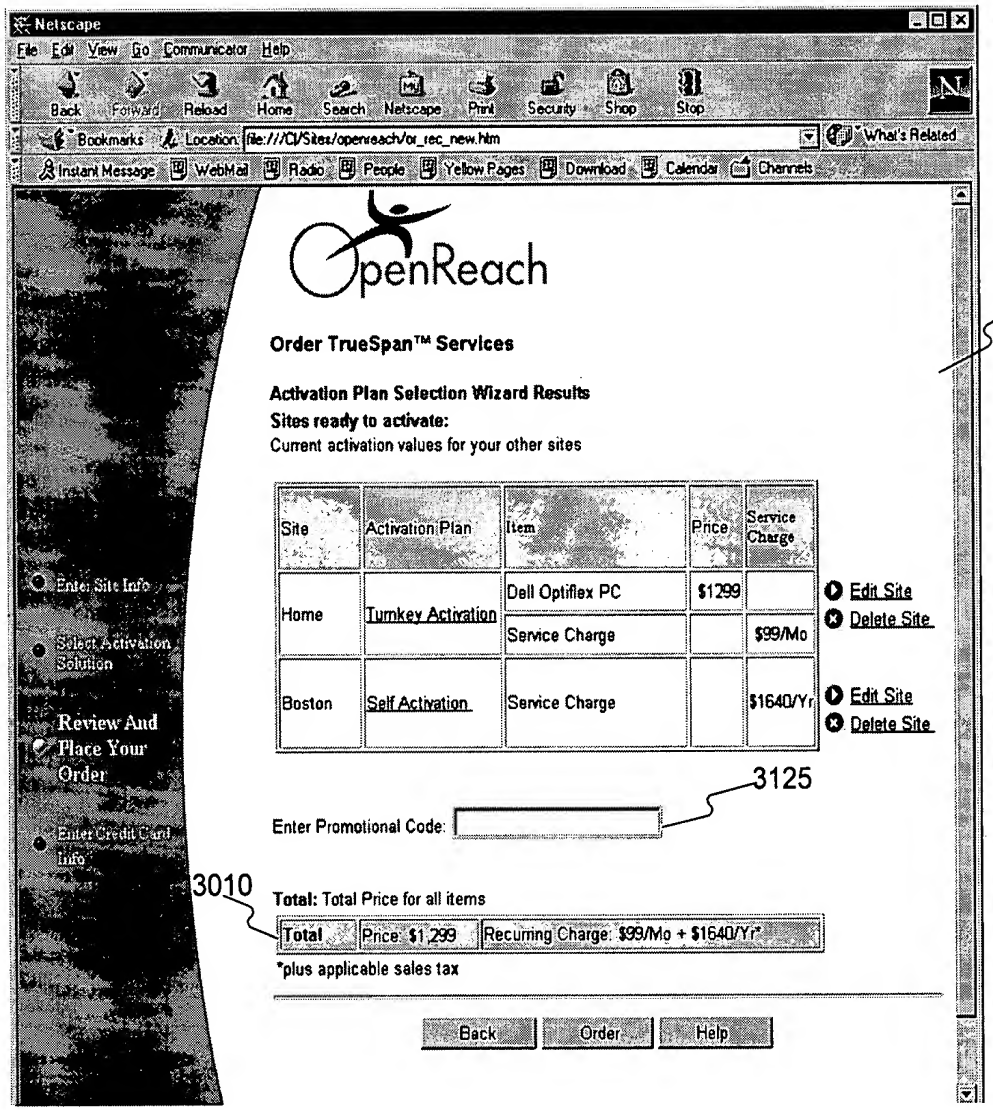

Netscape
File Edit View Go Communicator Help
Back Forward Reload Home Search Netscape Print Security Shop Stop
Bookmarks Location: file:///C|/Sites/openreach/or_rec_new.htm What's Related
Instant Message WebMail Radio People Yellow Pages Download Calendar Channels
OpenReach
3005
Order TrueSpan™ Services
Activation Plan Selection Wizard Results
Sites ready to activate:
Current activation values for your other sites
Site
Activation Plan
Item
Price
Service Charge
Home
Turnkey Activation
Dell Optiflex PC
$1299
Service Charge
$99/Mo
Edit Site
Delete Site
Boston
Self Activation
Service Charge
$1640/Yr
Edit Site
Delete Site
3125
Enter Promotional Code:
3010
Total: Total Price for all items
Total
Price: $1,299
Recurring Charge: $99/Mo + $1640/Yr*
*plus applicable sales tax
Back
Order
Help
Enter Site Info
Select Activation Solution
Review And Place Your Order
Enter Credit Card Info

FIG. 30

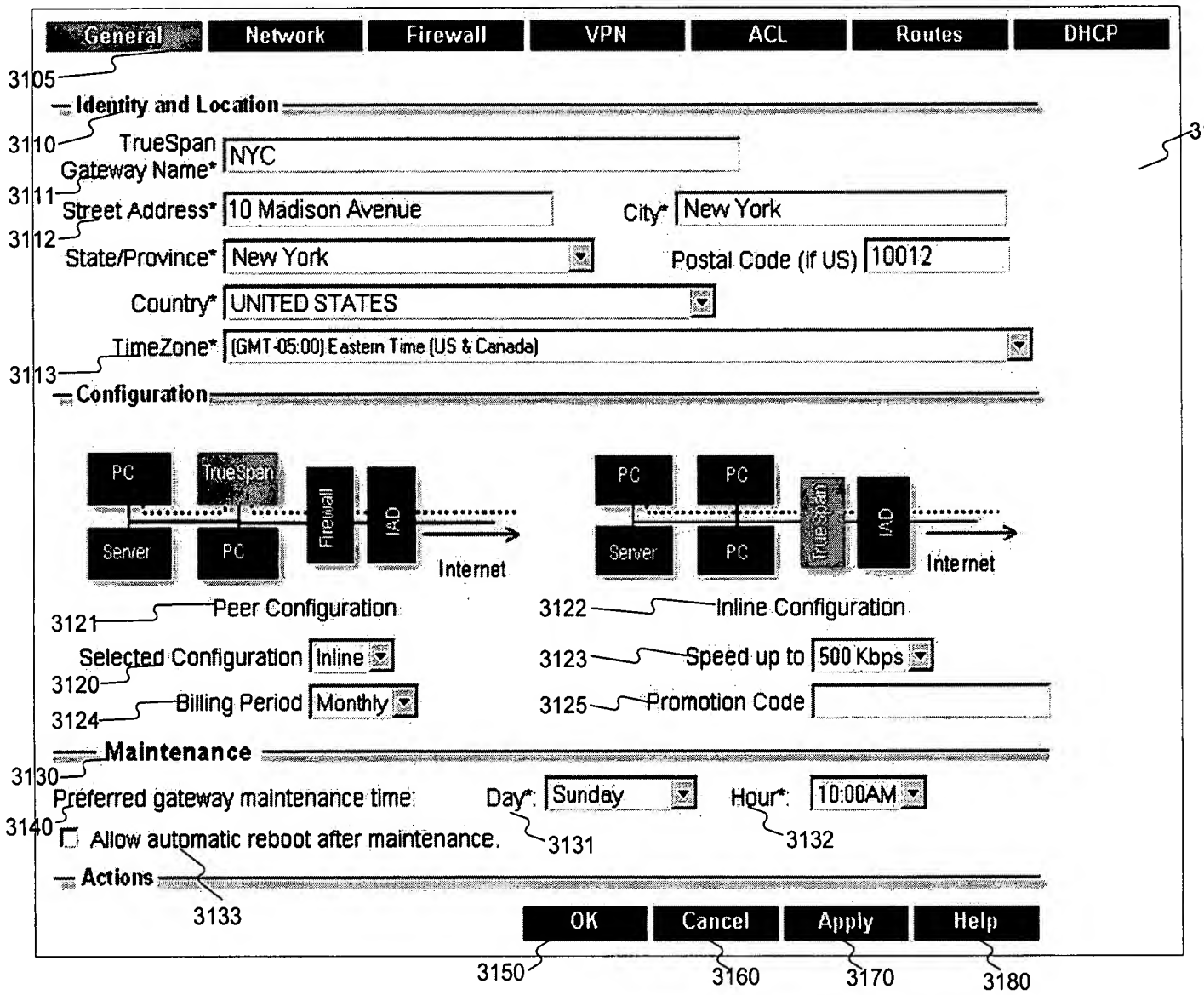

General
Network
Firewall
VPN
ACL
Routes
DHCP
3105
Identity and Location
3110
TrueSpan Gateway Name*
NYC
3101
3111
Street Address*
10 Madison Avenue
City*
New York
3112
State/Province*
New York
Postal Code (if US)
10012
Country*
UNITED STATES
TimeZone*
(GMT-05:00) Eastern Time (US & Canada)
3113
Configuration
PC
TrueSpan
Firewall
IAD
Server
PC
Internet
PC
PC
TrueSpan
IAD
Server
PC
Internet
3121
Peer Configuration
3122
Inline Configuration
Selected Configuration
Inline
3120
3123
Speed up to
500 Kbps
3124
Billing Period
Monthly
3125
Promotion Code
Maintenance
3130
Preferred gateway maintenance time:
Day*:
Sunday
Hour*:
10:00AM
3140
Allow automatic reboot after maintenance.
3131
3132
Actions
3133
OK
Cancel
Apply
Help
3150
3160
3170
3180

FIG. 31

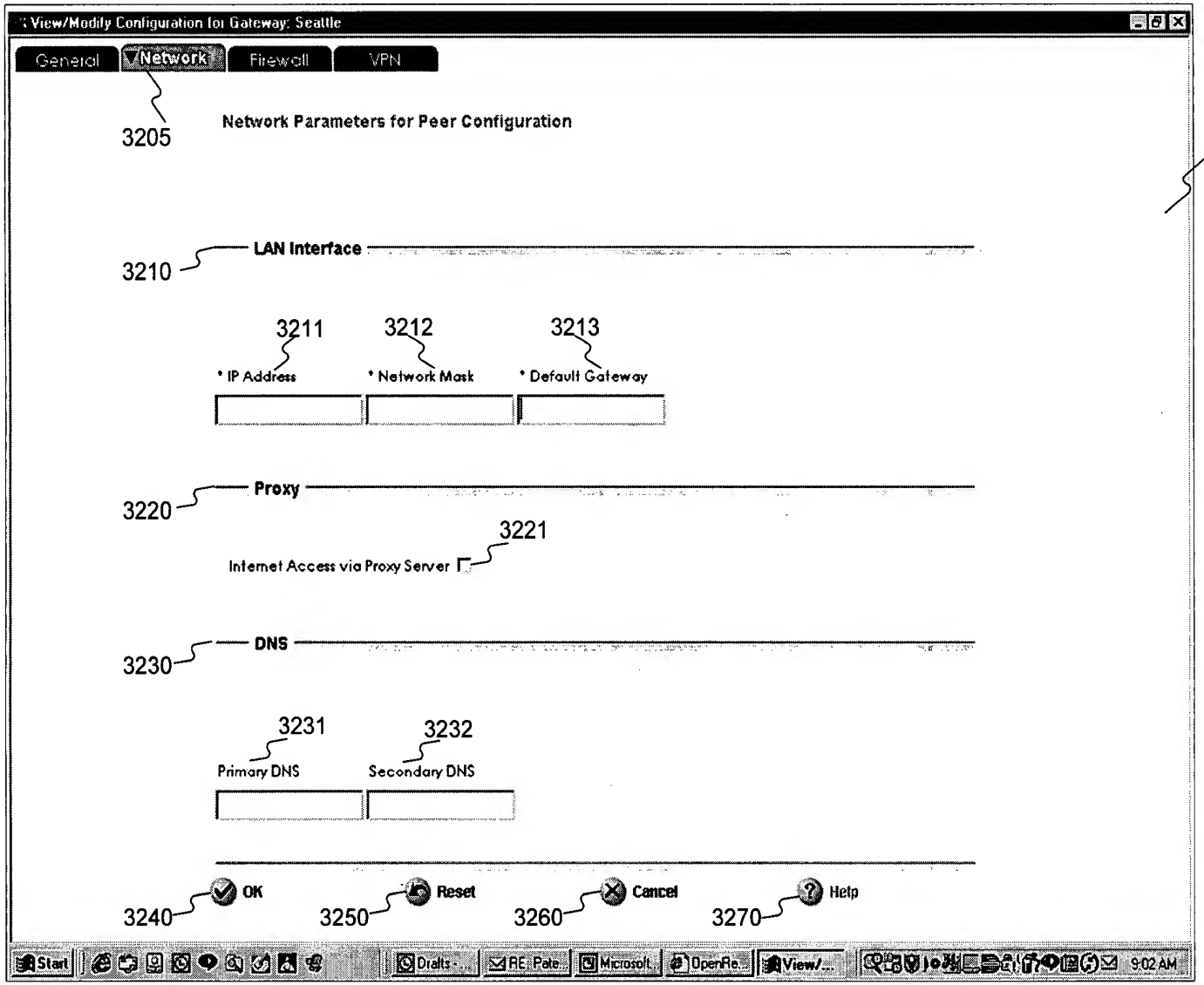

View/Modify Configuration for Gateway: Seattle
General
Network
Firewall
VPN
3205
Network Parameters for Peer Configuration
3275
LAN Interface
3210
3211
3212
3213
* IP Address
* Network Mask
* Default Gateway
Proxy
3220
3221
Internet Access via Proxy Server
DNS
3230
3231
3232
Primary DNS
Secondary DNS
OK
Reset
Cancel
Help
3240
3250
3260
3270
Start
9:02 AM

FIG. 32

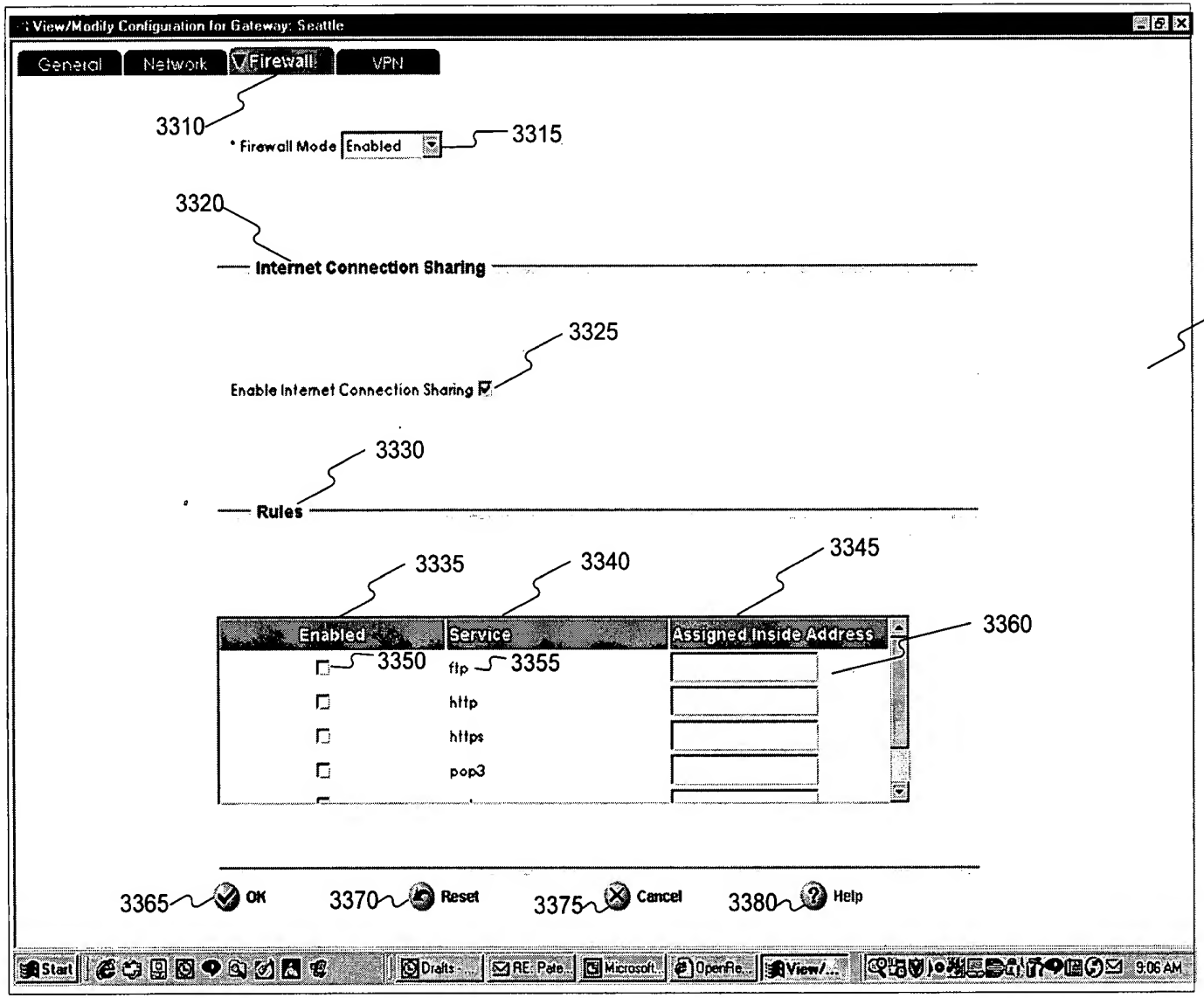

View/Modify Configuration for Gateway: Seattle
General
Network
Firewall
VPN
3310
* Firewall Mode
Enabled
3315
3320
Internet Connection Sharing
3305
3325
Enable Internet Connection Sharing
3330
Rules
3335
3340
3345
Enabled
Service
Assigned Inside Address
3360
3350
ftp
3355
http
https
pop3
3365
OK
3370
Reset
3375
Cancel
3380
Help
Start
Drafts
RE: Pete
Microsoft
OpenRe...
View/...
9:06 AM

FIG. 33

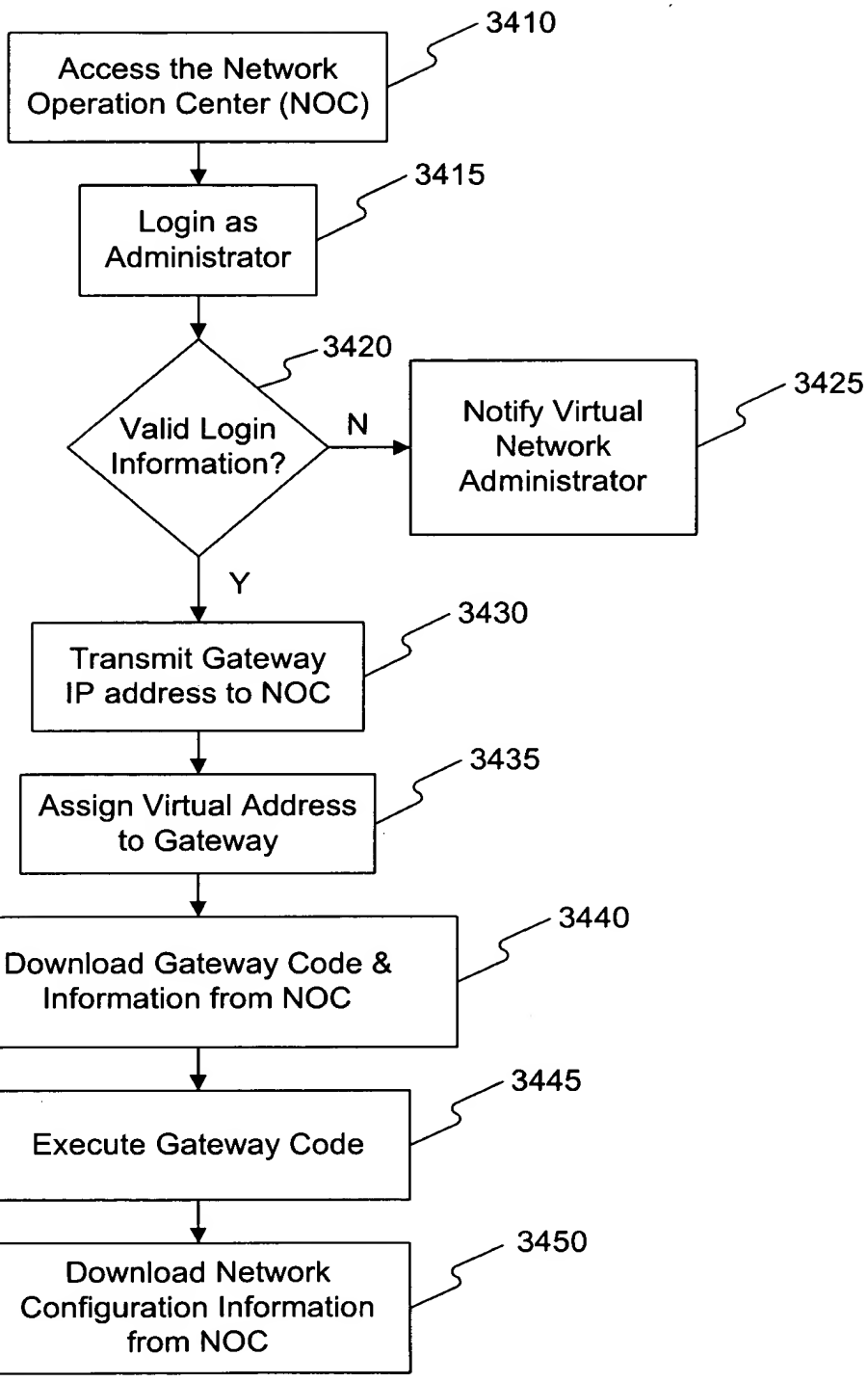

Access the Network Operation Center (NOC)
3410
Login as Administrator
3415
Valid Login Information?
3420
N
Notify Virtual Network Administrator
3425
Y
Transmit Gateway IP address to NOC
3430
Assign Virtual Address to Gateway
3435
Download Gateway Code & Information from NOC
3440
Execute Gateway Code
3445
Download Network Configuration Information from NOC
3450

FIG. 34

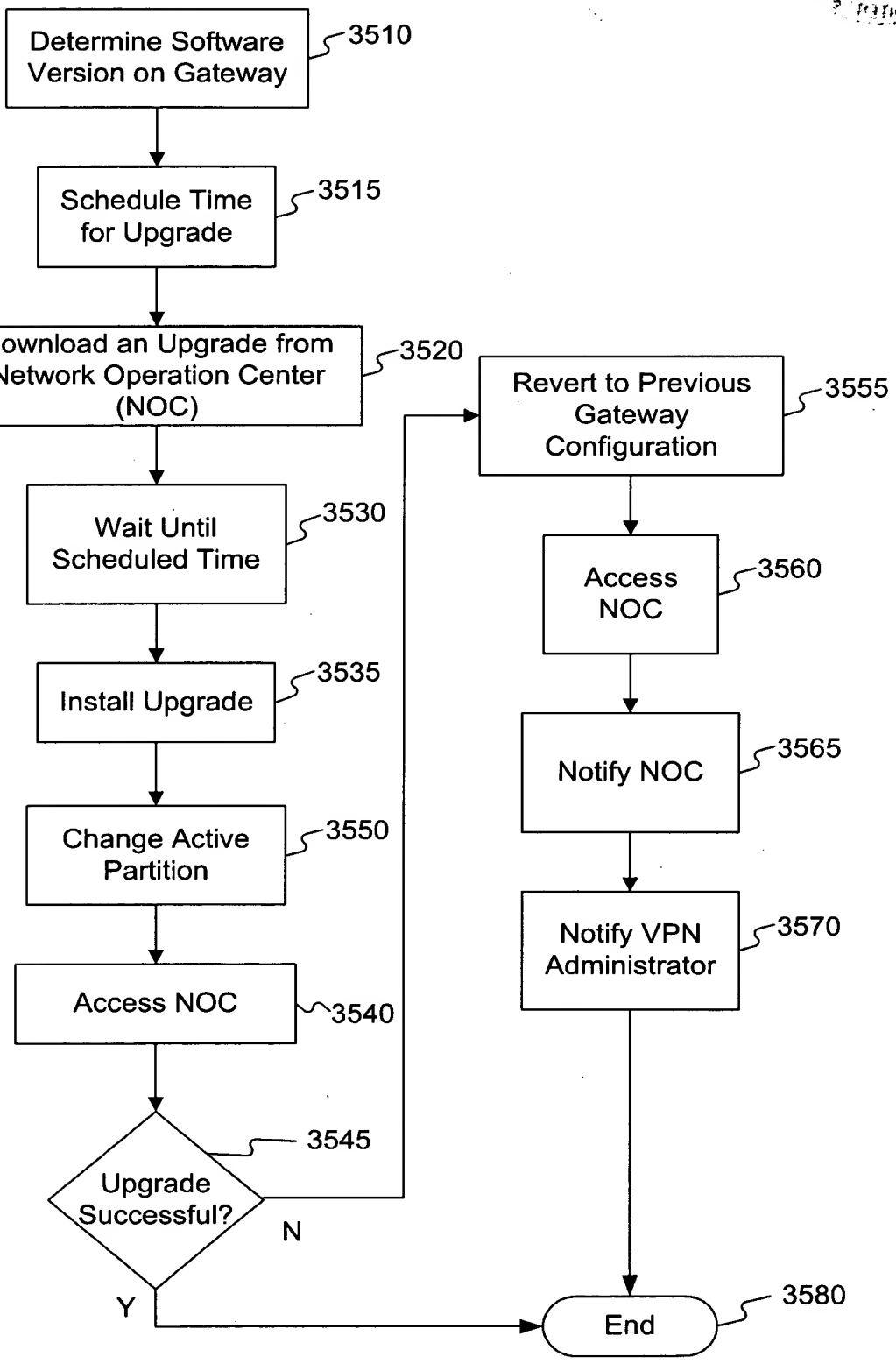

Determine Software Version on Gateway
3510
Schedule Time for Upgrade
3515
Download an Upgrade from Network Operation Center (NOC)
3520
Wait Until Scheduled Time
3530
Install Upgrade
3535
Change Active Partition
3550
Access NOC
3540
Upgrade Successful?
3545
N
Y
Revert to Previous Gateway Configuration
3555
Access NOC
3560
Notify NOC
3565
Notify VPN Administrator
3570
End
3580

FIG. 35

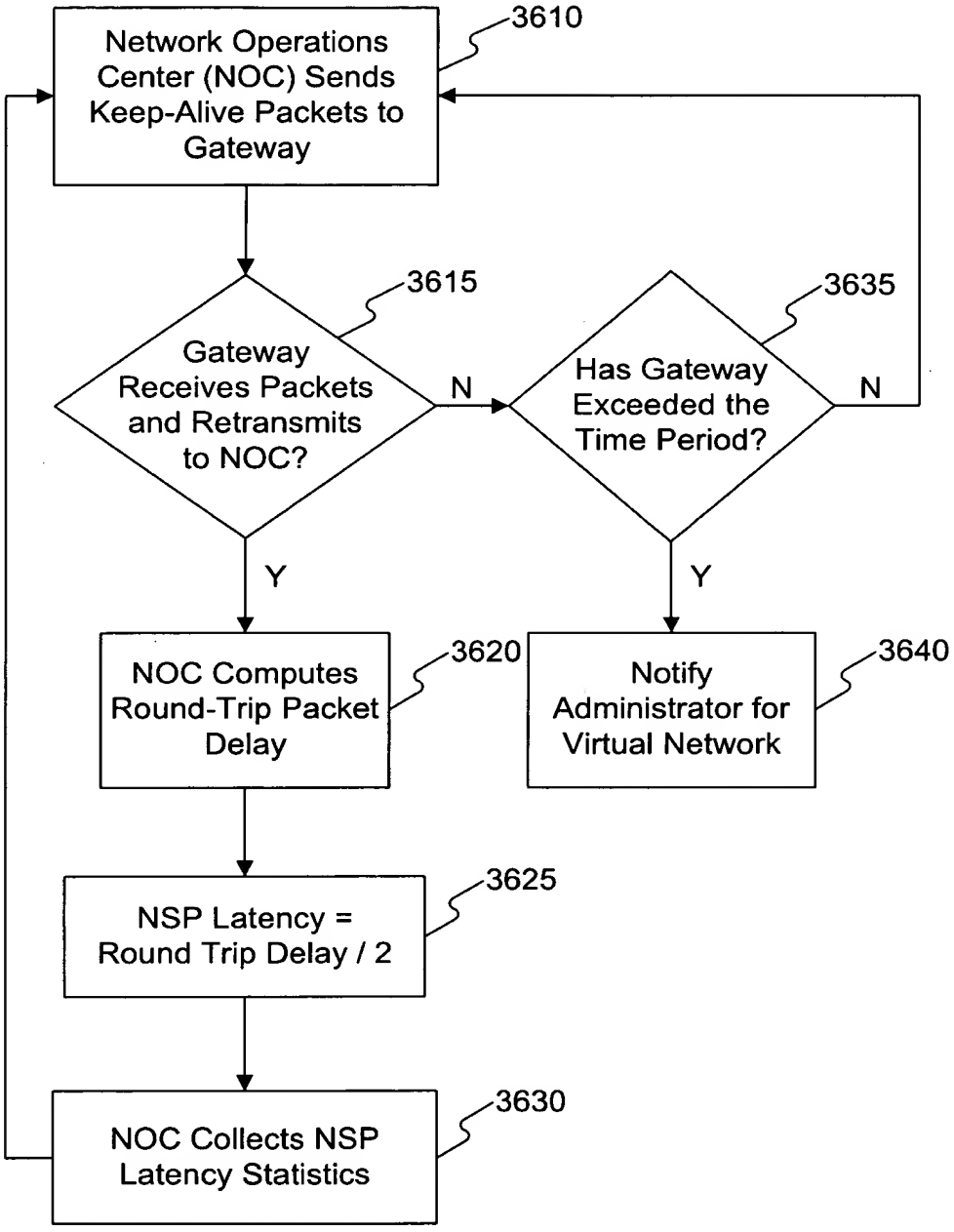

Network Operations Center (NOC) Sends Keep-Alive Packets to Gateway
3610
Gateway Receives Packets and Retransmits to NOC?
3615
N
Has Gateway Exceeded the Time Period?
3635
N
Y
Y
NOC Computes Round-Trip Packet Delay
3620
Notify Administrator for Virtual Network
3640
NSP Latency = Round Trip Delay / 2
3625
NOC Collects NSP Latency Statistics
3630

FIG. 36

SCANNED, #2

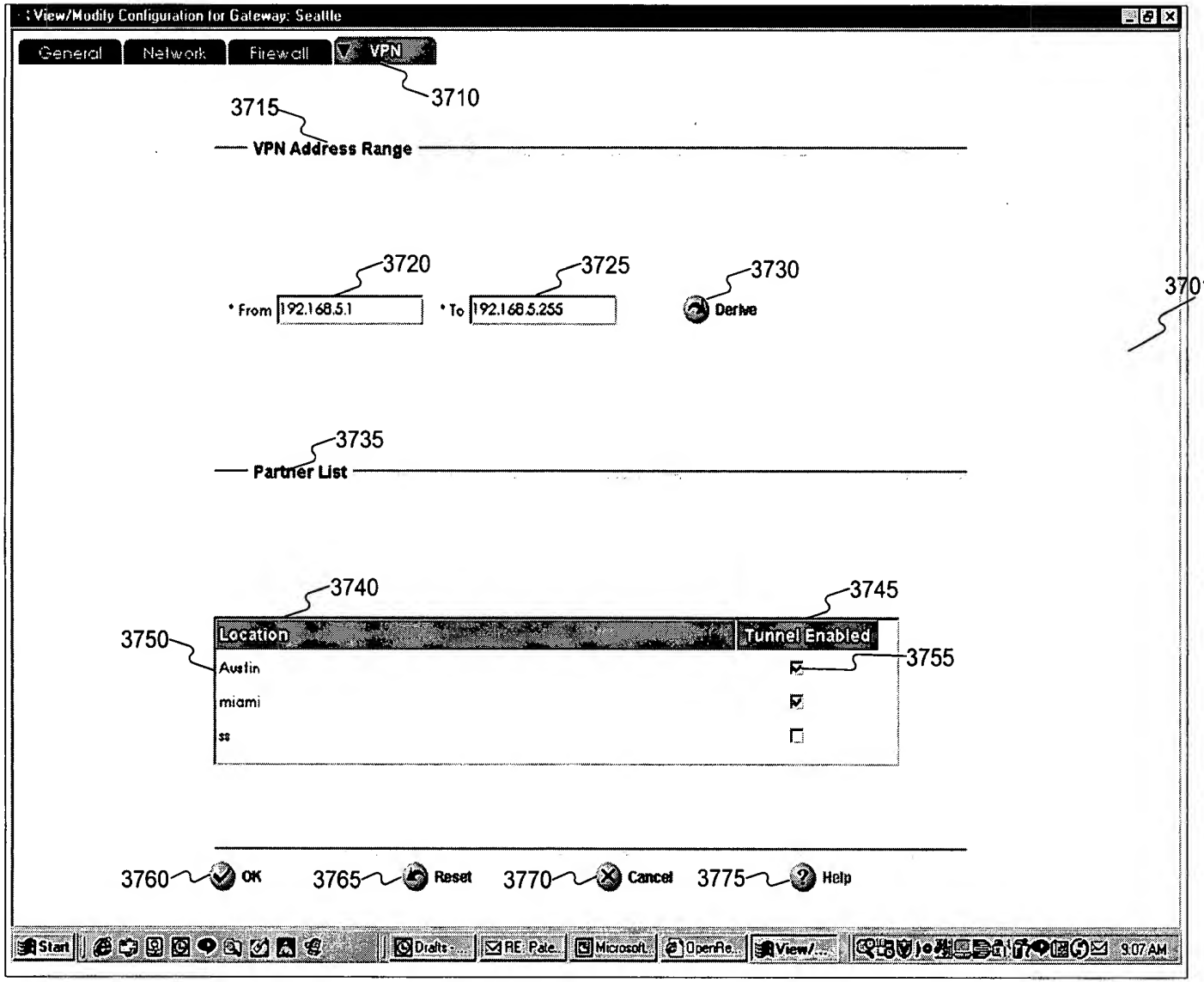


FIG. 37

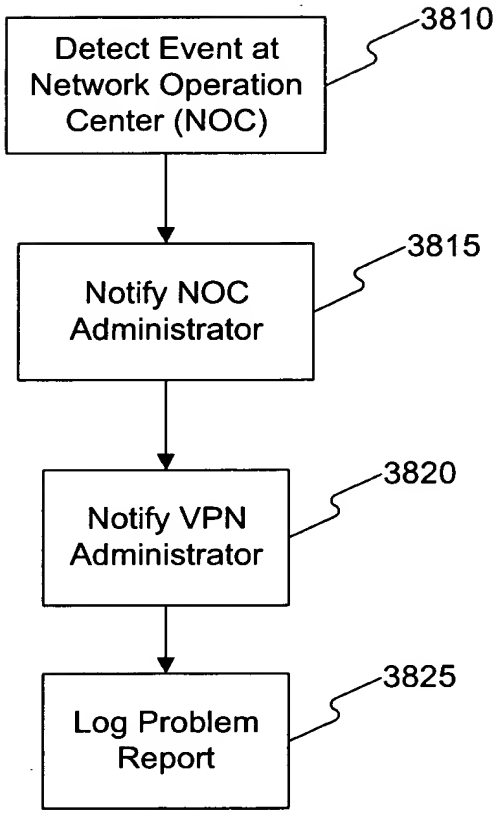

Detect Event at Network Operation Center (NOC)
3810
Notify NOC Administrator
3815
Notify VPN Administrator
3820
Log Problem Report
3825

FIG. 38

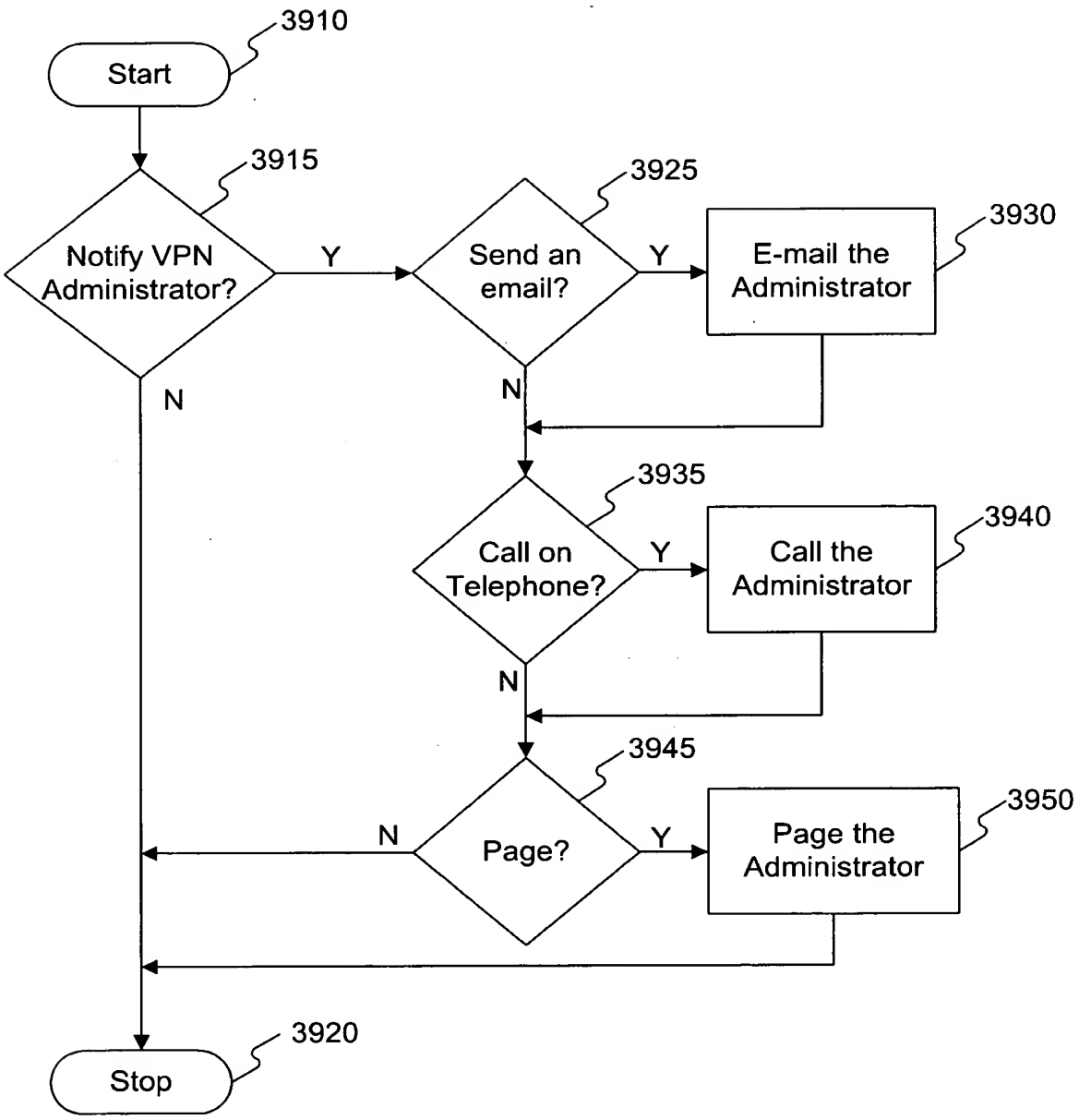

3910
Start
3915
Notify VPN Administrator?
Y
N
3925
Send an email?
Y
N
3930
E-mail the Administrator
3935
Call on Telephone?
Y
N
3940
Call the Administrator
3945
Page?
N
Y
3950
Page the Administrator
3920
Stop

FIG. 39

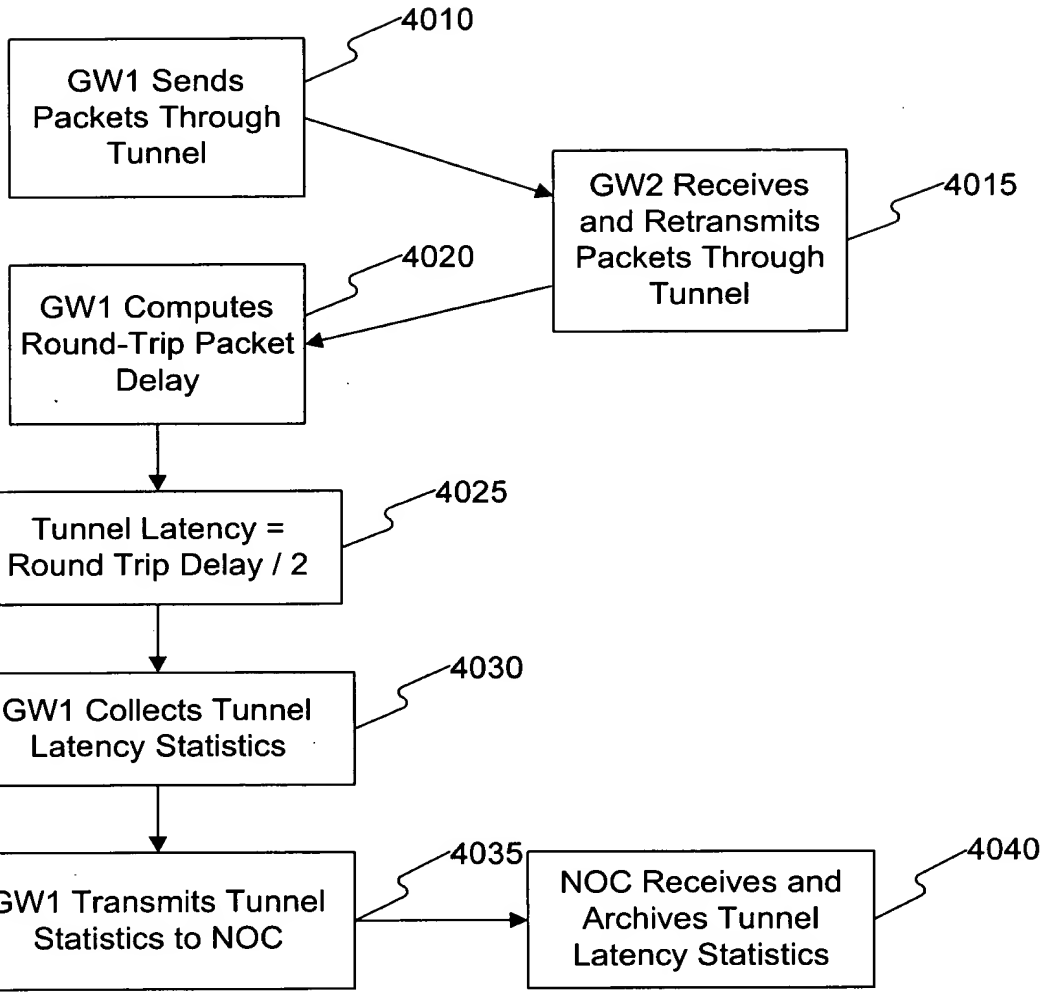

4010
GW1 Sends Packets Through Tunnel
GW2 Receives and Retransmits Packets Through Tunnel
4015
4020
GW1 Computes Round-Trip Packet Delay
Tunnel Latency = Round Trip Delay / 2
4025
GW1 Collects Tunnel Latency Statistics
4030
GW1 Transmits Tunnel Statistics to NOC
4035
NOC Receives and Archives Tunnel Latency Statistics
4040

FIG. 40

IDET80 5hE2E860

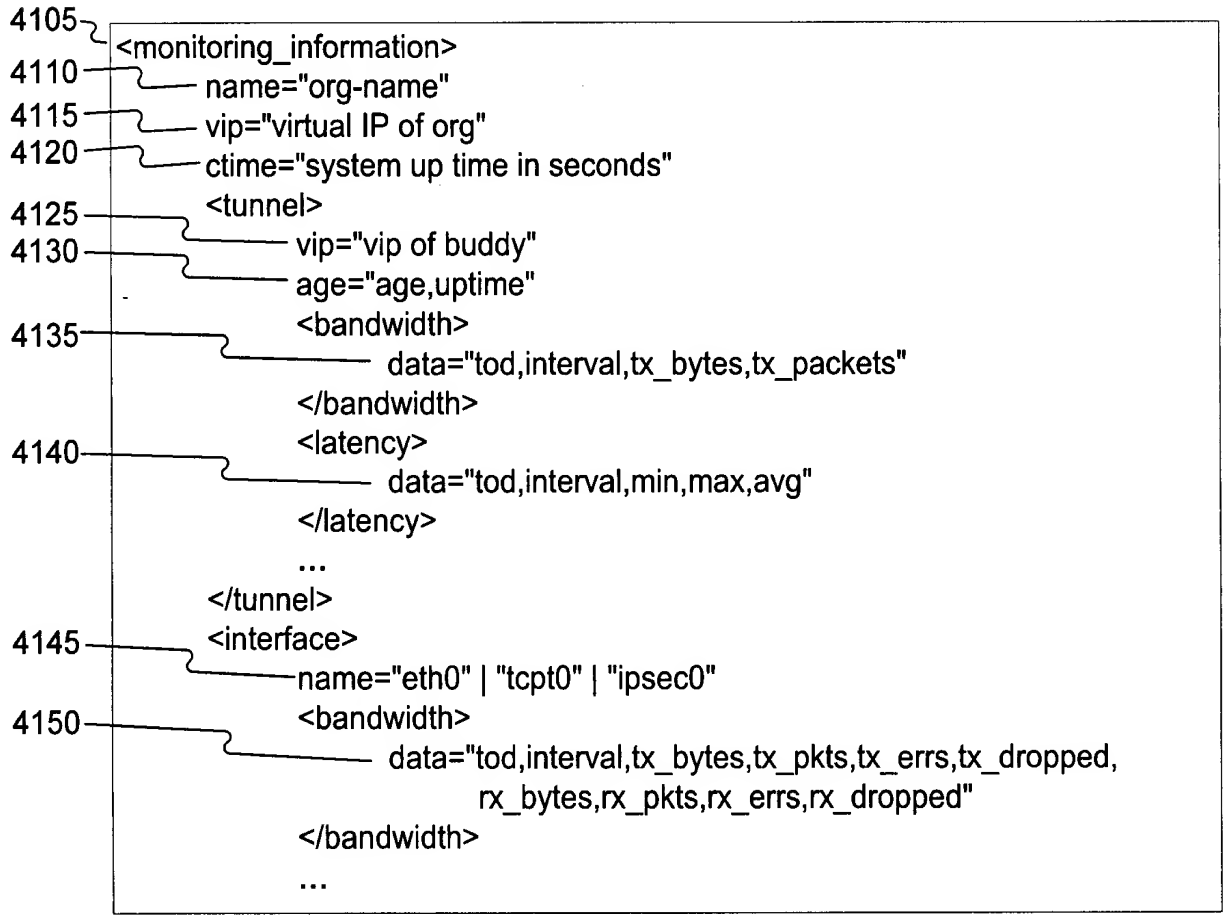
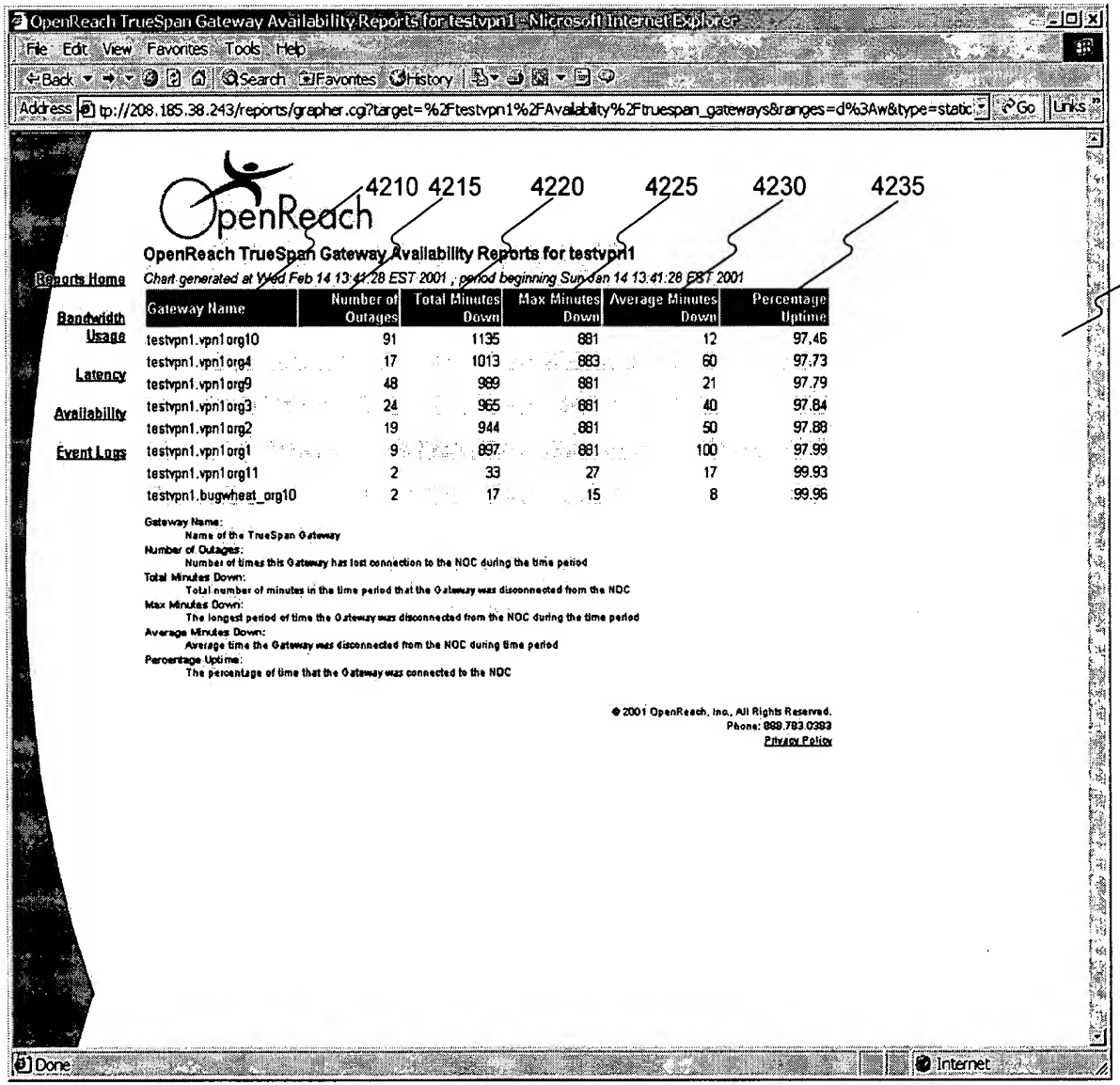


FIG. 41


OpenReach TrueSpan Gateway Availability Reports for testvpn1 - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites History
Address tp://208.185.38.243/reports/grapher.cgi?target=%2Ftestvpn1%2FAvailability%2Ftruespan_gateways&ranges=d%3Aw&type=static
Go Links
4210 4215 4220 4225 4230 4235
4205
OpenReach
OpenReach TrueSpan Gateway Availability Reports for testvpn1
Chart generated at Wed Feb 14 13:41:28 EST 2001 , period beginning Sun Jan 14 13:41:28 EST 2001
Reports Home
Bandwidth Usage
Latency
Availability
Event Logs
Gateway Name | Number of Outages | Total Minutes Down | Max Minutes Down | Average Minutes Down | Percentage Uptime
testvpn1.vpn1org10 | 91 | 1135 | 881 | 12 | 97.46
testvpn1.vpn1org4 | 17 | 1013 | 883 | 60 | 97.73
testvpn1.vpn1org9 | 48 | 989 | 881 | 21 | 97.79
testvpn1.vpn1org3 | 24 | 965 | 881 | 40 | 97.84
testvpn1.vpn1org2 | 19 | 944 | 881 | 50 | 97.88
testvpn1.vpn1org1 | 9 | 897 | 881 | 100 | 97.99
testvpn1.vpn1org11 | 2 | 33 | 27 | 17 | 99.93
testvpn1.bugwheat_org10 | 2 | 17 | 15 | 8 | 99.96
Gateway Name:
Name of the TrueSpan Gateway
Number of Outages:
Number of times this Gateway has lost connection to the NOC during the time period
Total Minutes Down:
Total number of minutes in the time period that the Gateway was disconnected from the NOC
Max Minutes Down:
The longest period of time the Gateway was disconnected from the NOC during the time period
Average Minutes Down:
Average time the Gateway was disconnected from the NOC during time period
Percentage Uptime:
The percentage of time that the Gateway was connected to the NOC
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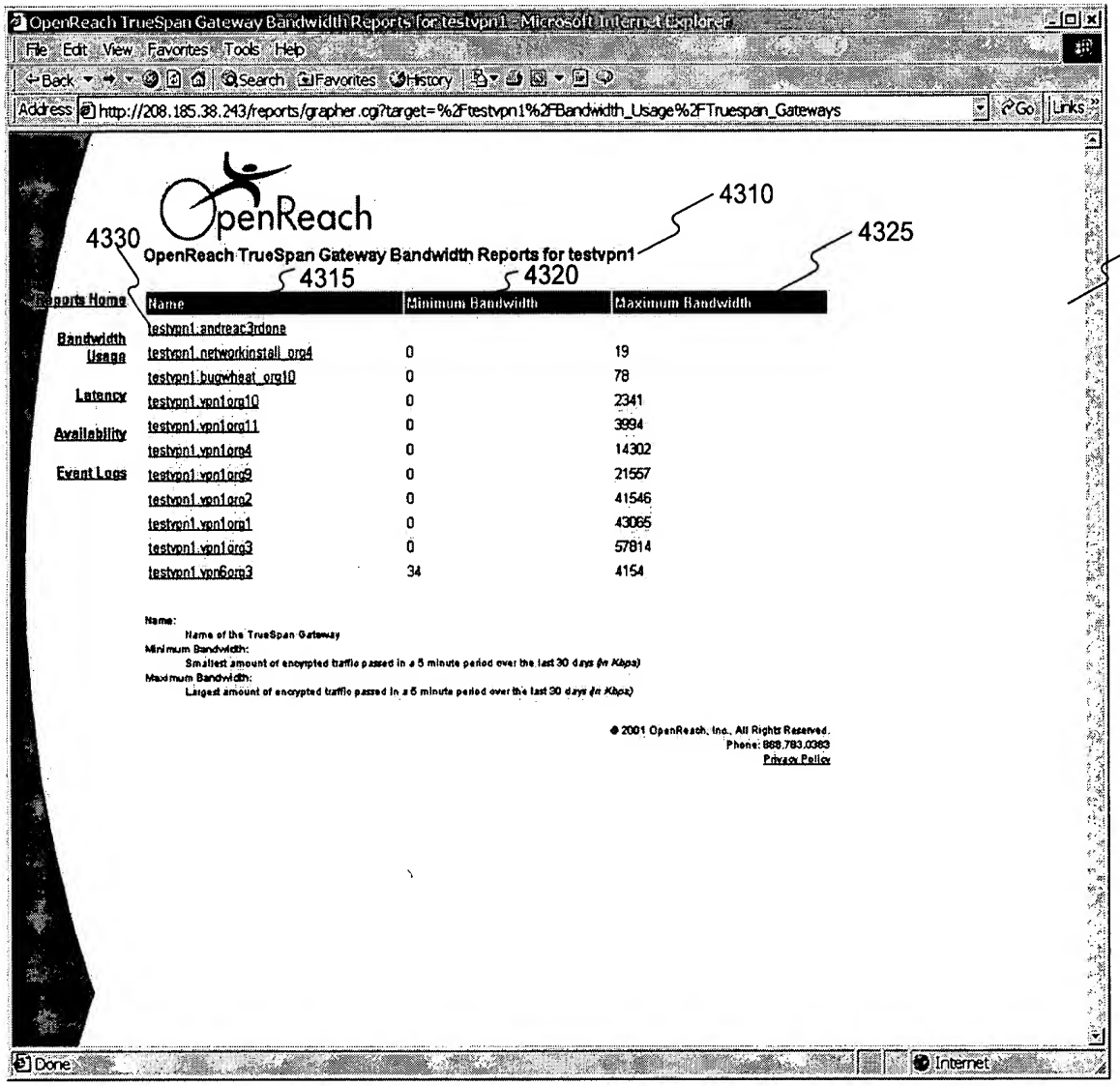
Phone: 888.783.0383
Privacy Policy
Done
Internet

FIG. 42


OpenReach TrueSpan Gateway Bandwidth Reports for testvpn1 - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites History
Address http://208.185.38.243/reports/grapher.cgi?target=%2Ftestvpn1%2FBandwidth_Usage%2FTruespan_Gateways
Go Links
OpenReach
OpenReach TrueSpan Gateway Bandwidth Reports for testvpn1
4310
4325
4305
4330
4315
4320
Reports Home
Bandwidth Usage
Latency
Availability
Event Logs
Name
Minimum Bandwidth
Maximum Bandwidth
testvpn1.andreac3rdone
testvpn1.networkinstall_org4 0 19
testvpn1.bugwheat_org10 0 78
testvpn1.vpn1org10 0 2341
testvpn1.vpn1org11 0 3994
testvpn1.vpn1org4 0 14302
testvpn1.vpn1org9 0 21557
testvpn1.vpn1org2 0 41546
testvpn1.vpn1org1 0 43065
testvpn1.vpn1org3 0 57814
testvpn1.vpn6org3 34 4154
Name:
Name of the TrueSpan Gateway
Minimum Bandwidth:
Smallest amount of encrypted traffic passed in a 5 minute period over the last 30 days (in Kbps)
Maximum Bandwidth:
Largest amount of encrypted traffic passed in a 5 minute period over the last 30 days (in Kbps)
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Phone: 888.783.0383
Privacy Policy
Done
Internet

FIG. 43

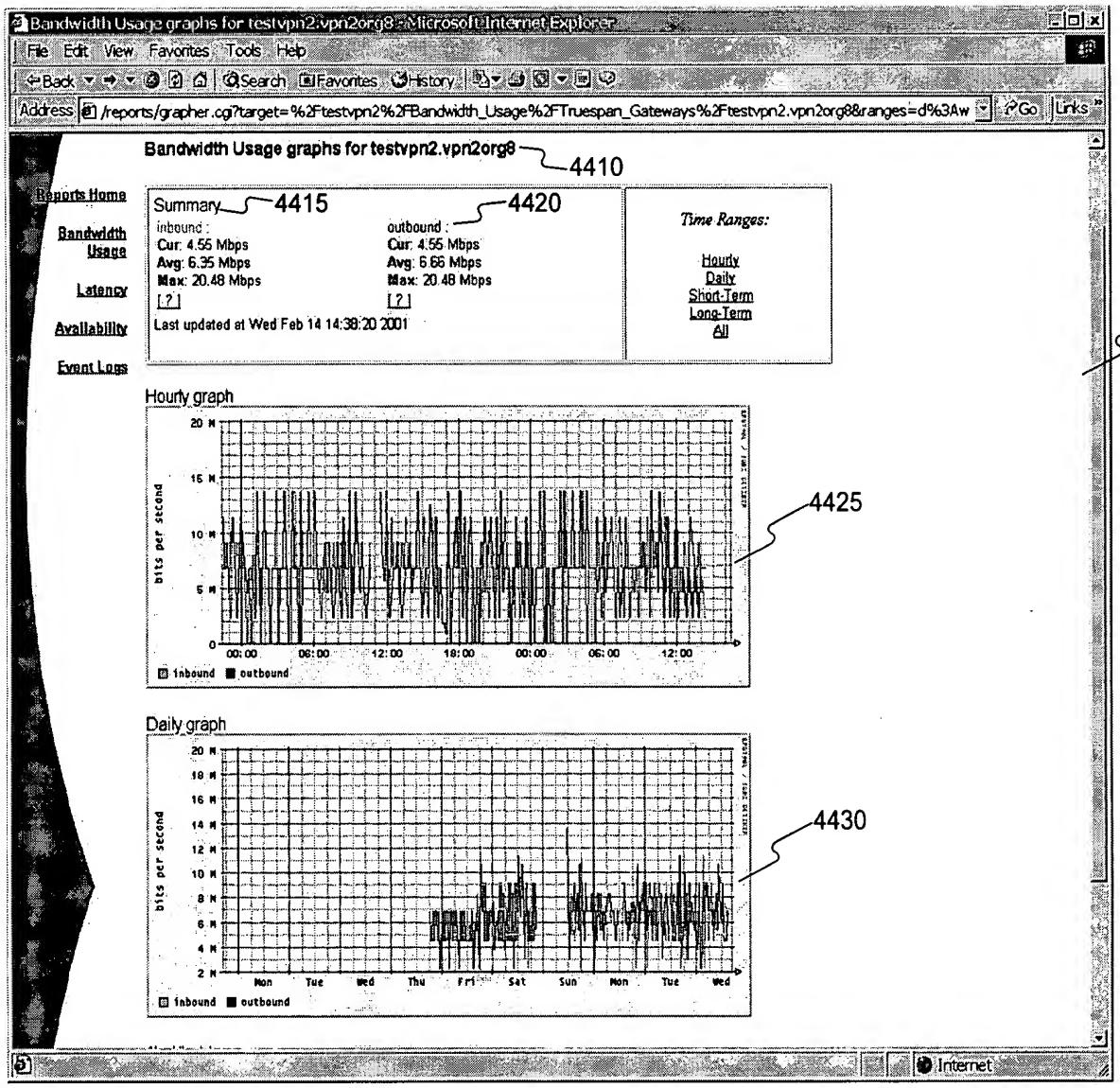
Bandwidth Usage graphs for testvpn2.vpn2org8 - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites History
Address /reports/grapher.cgi?target=%2Ftestvpn2%2FBandwidth_Usage%2FTruespan_Gateways%2Ftestvpn2.vpn2org8&ranges=d%3Aw
Go Links
Bandwidth Usage graphs for testvpn2.vpn2org8
4410
Reports Home
Bandwidth Usage
Latency
Availability
Event Logs
Summary
4415
4420
inbound :
Cur: 4.55 Mbps
Avg: 6.35 Mbps
Max: 20.48 Mbps
[?]
outbound :
Cur: 4.55 Mbps
Avg: 6.66 Mbps
Max: 20.48 Mbps
[?]
Last updated at Wed Feb 14 14:38:20 2001
Time Ranges:
Hourly
Daily
Short-Term
Long-Term
All
4405
Hourly graph
bits per second
20 M
15 M
10 M
5 M
0
00:00
06:00
12:00
18:00
00:00
06:00
12:00
inbound
outbound
4425
Daily graph
bits per second
20 M
18 M
16 M
14 M
12 M
10 M
8 M
6 M
4 M
2 M
Mon
Tue
Wed
Thu
Fri
Sat
Sun
Mon
Tue
Wed
inbound
outbound
4430
Internet

FIG. 44

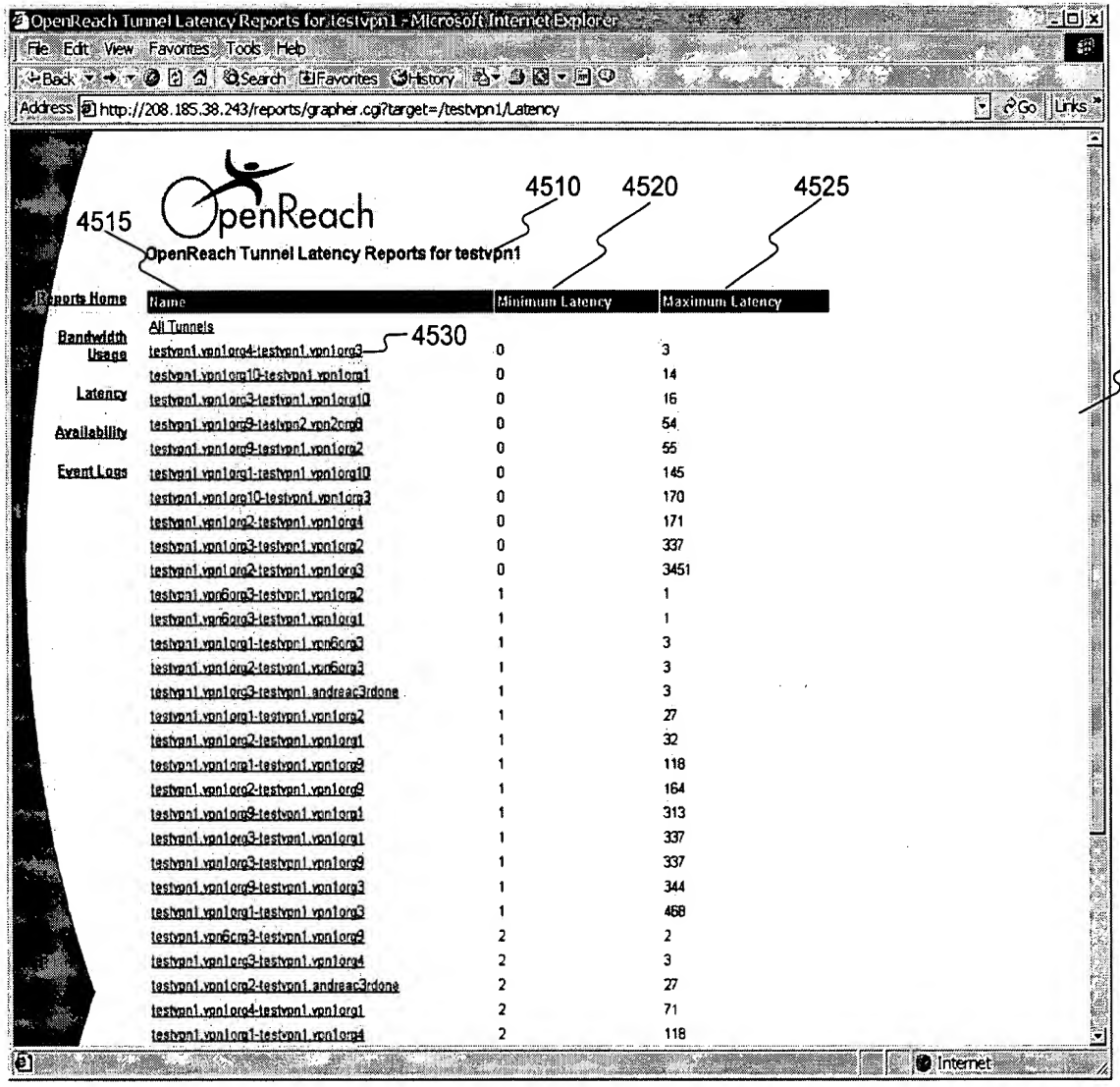
OpenReach Tunnel Latency Reports for testvpn1 - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://208.185.38.243/reports/grapher.cgi?target=/testvpn1/Latency
4515
4510
4520
4525
4530
4505
OpenReach
OpenReach Tunnel Latency Reports for testvpn1
Reports Home
Bandwidth Usage
Latency
Availability
Event Logs
Name
Minimum Latency
Maximum Latency
All Tunnels
testvpn1.vpn1org4-testvpn1.vpn1org3 0 3
testvpn1.vpn1org10-testvpn1.vpn1org1 0 14
testvpn1.vpn1org3-testvpn1.vpn1org10 0 16
testvpn1.vpn1org9-testvpn2.vpn2org9 0 54
testvpn1.vpn1org9-testvpn1.vpn1org2 0 55
testvpn1.vpn1org1-testvpn1.vpn1org10 0 145
testvpn1.vpn1org10-testvpn1.vpn1org3 0 170
testvpn1.vpn1org2-testvpn1.vpn1org4 0 171
testvpn1.vpn1org3-testvpn1.vpn1org2 0 337
testvpn1.vpn1org2-testvpn1.vpn1org3 0 3451
testvpn1.vpn6org3-testvpn1.vpn1org2 1 1
testvpn1.vpn6org3-testvpn1.vpn1org1 1 1
testvpn1.vpn1org1-testvpn1.vpn6org3 1 3
testvpn1.vpn1org2-testvpn1.vpn6org3 1 3
testvpn1.vpn1org3-testvpn1.andreac3rdone 1 3
testvpn1.vpn1org1-testvpn1.vpn1org2 1 27
testvpn1.vpn1org2-testvpn1.vpn1org1 1 32
testvpn1.vpn1org1-testvpn1.vpn1org9 1 118
testvpn1.vpn1org2-testvpn1.vpn1org9 1 164
testvpn1.vpn1org9-testvpn1.vpn1org1 1 313
testvpn1.vpn1org3-testvpn1.vpn1org1 1 337
testvpn1.vpn1org3-testvpn1.vpn1org9 1 337
testvpn1.vpn1org9-testvpn1.vpn1org3 1 344
testvpn1.vpn1org1-testvpn1.vpn1org3 1 468
testvpn1.vpn6org3-testvpn1.vpn1org9 2 2
testvpn1.vpn1org3-testvpn1.vpn1org4 2 3
testvpn1.vpn1org2-testvpn1.andreac3rdone 2 27
testvpn1.vpn1org4-testvpn1.vpn1org1 2 71
testvpn1.vpn1org1-testvpn1.vpn1org4 2 118
Internet

FIG. 45

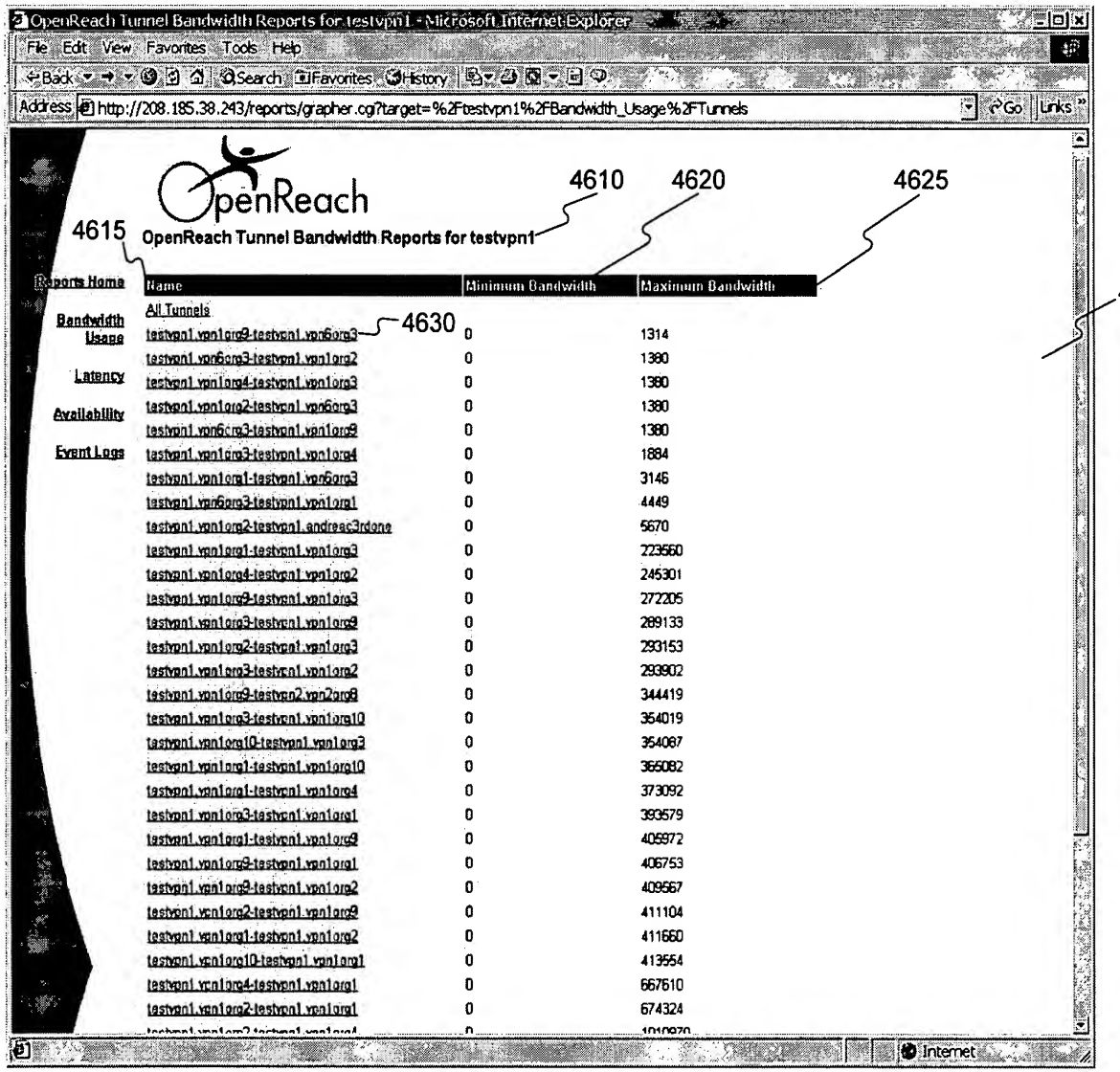
OpenReach Tunnel Bandwidth Reports for testvpn1 - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites History
Address http://208.185.38.243/reports/grapher.cgi?target=%2Ftestvpn1%2FBandwidth_Usage%2FTunnels
Go Links
OpenReach
4610
4620
4625
4615
OpenReach Tunnel Bandwidth Reports for testvpn1
4605
Reports Home
Bandwidth Usage
Latency
Availability
Event Logs
Name
Minimum Bandwidth
Maximum Bandwidth
All Tunnels
4630
testvpn1.vpn1org9-testvpn1.vpn6org3 0 1314
testvpn1.vpn6org3-testvpn1.vpn1org2 0 1380
testvpn1.vpn1org4-testvpn1.vpn1org3 0 1380
testvpn1.vpn1org2-testvpn1.vpn6org3 0 1380
testvpn1.vpn6org3-testvpn1.vpn1org9 0 1380
testvpn1.vpn1org3-testvpn1.vpn1org4 0 1884
testvpn1.vpn1org1-testvpn1.vpn6org3 0 3146
testvpn1.vpn6org3-testvpn1.vpn1org1 0 4449
testvpn1.vpn1org2-testvpn1.andreac3rdone 0 5670
testvpn1.vpn1org1-testvpn1.vpn1org3 0 223560
testvpn1.vpn1org4-testvpn1.vpn1org2 0 245301
testvpn1.vpn1org9-testvpn1.vpn1org3 0 272205
testvpn1.vpn1org3-testvpn1.vpn1org9 0 289133
testvpn1.vpn1org2-testvpn1.vpn1org3 0 293153
testvpn1.vpn1org3-testvpn1.vpn1org2 0 293902
testvpn1.vpn1org9-testvpn2.vpn2org8 0 344419
testvpn1.vpn1org3-testvpn1.vpn1org10 0 354019
testvpn1.vpn1org10-testvpn1.vpn1org3 0 354087
testvpn1.vpn1org1-testvpn1.vpn1org10 0 365082
testvpn1.vpn1org1-testvpn1.vpn1org4 0 373092
testvpn1.vpn1org3-testvpn1.vpn1org1 0 393579
testvpn1.vpn1org1-testvpn1.vpn1org9 0 405972
testvpn1.vpn1org9-testvpn1.vpn1org1 0 406753
testvpn1.vpn1org9-testvpn1.vpn1org2 0 409567
testvpn1.vpn1org2-testvpn1.vpn1org9 0 411104
testvpn1.vpn1org1-testvpn1.vpn1org2 0 411660
testvpn1.vpn1org10-testvpn1.vpn1org1 0 413554
testvpn1.vpn1org4-testvpn1.vpn1org1 0 667610
testvpn1.vpn1org2-testvpn1.vpn1org1 0 674324
Internet

FIG. 46

SCANNED, # 2

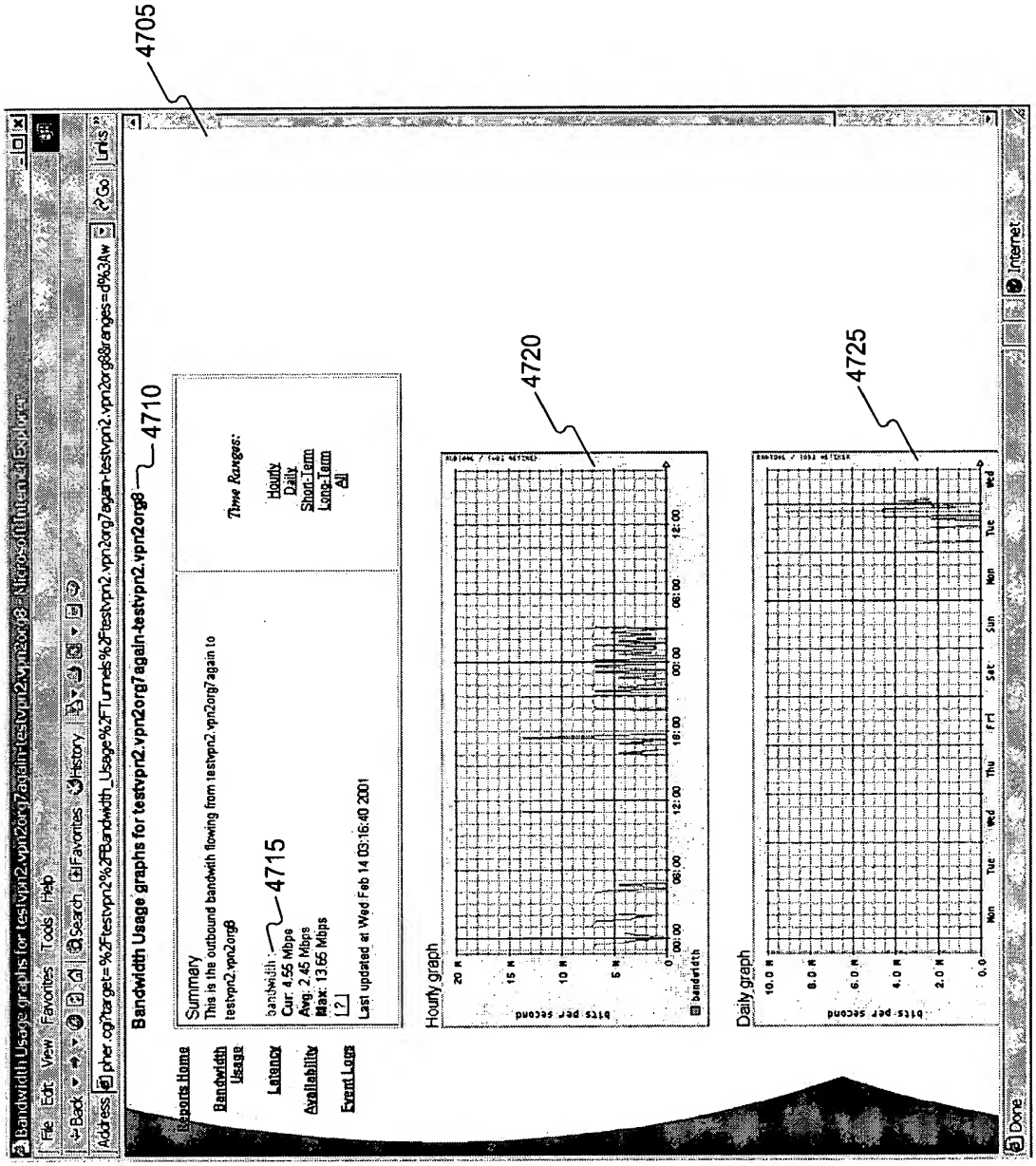

FIG. 47

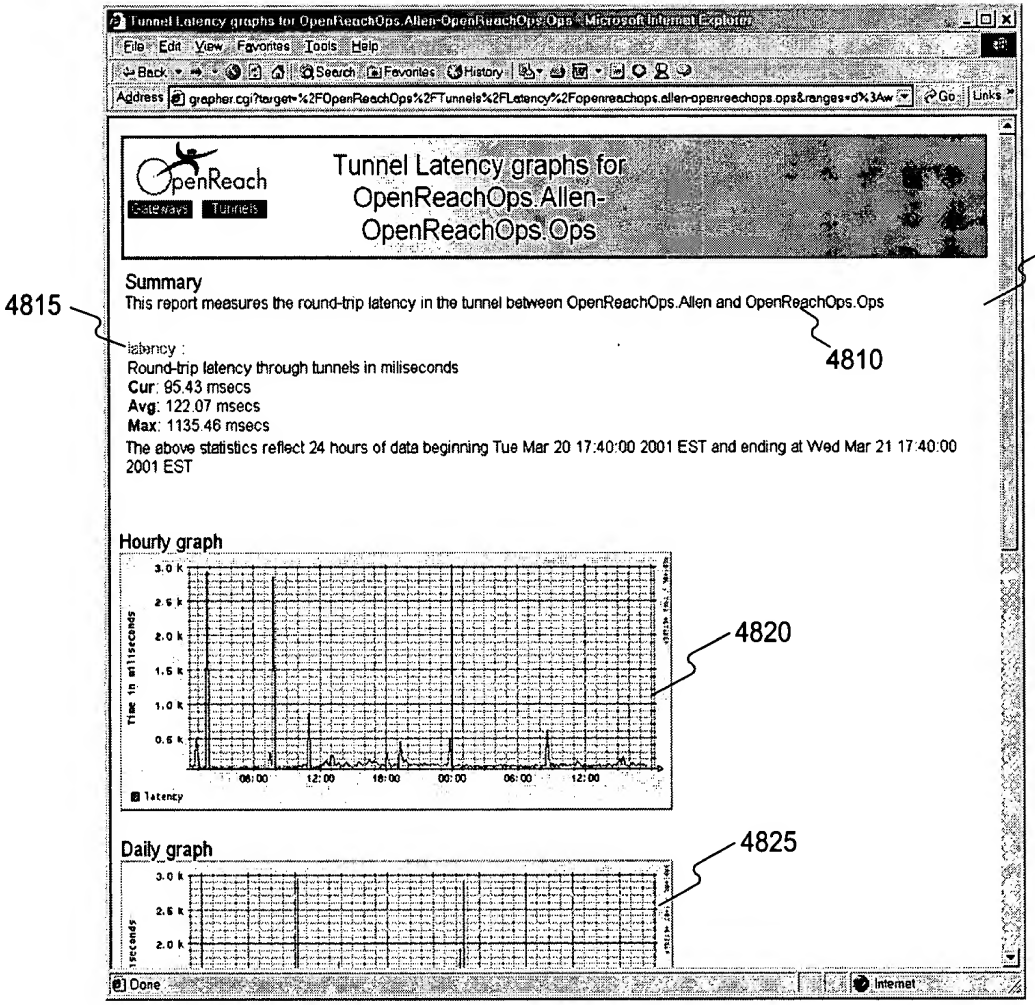
Tunnel Latency graphs for OpenReachOps.Allen-OpenReachOps.Ops - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites History
Address grapher.cgi?target=%2FOpenReachOps%2FTunnels%2FLatency%2Fopenreachops.allen-openreachops.ops&ranges=d%3Aw
Go Links
OpenReach
Gateways
Tunnels
Tunnel Latency graphs for OpenReachOps.Allen-OpenReachOps.Ops
4805
Summary
This report measures the round-trip latency in the tunnel between OpenReachOps.Allen and OpenReachOps.Ops
4815
4810
latency :
Round-trip latency through tunnels in miliseconds
Cur: 95.43 msecs
Avg: 122.07 msecs
Max: 1135.46 msecs
The above statistics reflect 24 hours of data beginning Tue Mar 20 17:40:00 2001 EST and ending at Wed Mar 21 17:40:00 2001 EST
Hourly graph
3.0 k
2.5 k
2.0 k
1.5 k
1.0 k
0.5 k
Time in milliseconds
06:00
12:00
18:00
00:00
06:00
12:00
Latency
4820
Daily graph
4825
Done
Internet

FIG. 48